SHARP

SERVICE MANUAL

SE00LC32DH510
Issued: 22nd March 2010

LCD COLOUR TELEVISION

DVB-T (HDTV), PAL B/G, I / SECAM B/G, D/K, L/L' SYSTEM COLOUR TELEVISION

MODEL
LC-32DH510E

In the interests of user safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to chage without notice.

ELECTRICAL SPECIFICATIONS

Specifications

Item			32" LCD COLOUR TV, Model: LC-32DH510E
LCD Panel			32" Advanced Super View & BLACK TFT LCD
Resolution			1,049,680 pixels (1,366 x 768)
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV Functions	TV Standard	Analogue	CCIR (B/G, I, D/K, L/L')
		Digital	DVB-T (2K/8K OFDM)(H.264)
	Receiving Channel	VHF/UHF	E2–E69 ch, F2–F10 ch, I21–I69 ch, IR A–IR J ch (Digital: IR A ch–E69 ch)
		CATV	Hyper-band, S1–S41 ch
	TV-Tuning System		Auto Preset 999 ch: non-Nordic / 9999 ch: Nordic (ATV: 99 ch), Auto Label, Auto Sort
	STEREO / BILINGUAL		NICAM/A2
Brightness			500 cd/m^2
Backlight life			60,000 hours (when "Backlight" is set the STANDARD, the default position)
Viewing angles			H: 176°, V: 176°
Audio Amplifier			10 W x 2
Speaker			(35 mm x 100 mm) x 2
Terminals	TV Antenna		UHF/VHF 75 Ω Din type (Analogue & Digital)
	SERVICE		Ø 3.5 mm jack
	SCART1		SCART (AV input, RGB input, TV output)
	SCART2		SCART (AV input/ monitor output, Y/C input)
	COMPONENTS		COMPONENT IN: Y/PB(CB)/PR(CR), RCA pin (AUDIO R/L)
	HDMI1		HDMI, Ø 3.5mm jack
	HDMI2		HDMI, Ø 3.5mm jack
	AV		RCA connector (AV input)
	MEDIA PLAYER		USB 2.0 HOST (A type)
	DIGITAL AUDIO OUTPUT		S/PDIF digital audio output.
	C. I. (Interface Common)		EN50221, R206001
	Headphones		Ø 3.5 mm jack (Audio output)
OSD language			Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Norwegian, Polish, Portuguese, Russian, Slovak, Slovene, Spanish, Swedish, Turkish, Ukrainian
Power Requirement			AC 220–240 V, 50 Hz
Power Consumption (IEC62087 Method)			104W (0.20 W Standby)
Weight			9,4 Kg (Without stand), 11,1 Kg (With stand)
Operating Temperature			0 °C to +40 °C

Environmental Specifications

*1 On-Mode (W) (HOME MODE)		81 W
*2 Energy-Save-Mode (W)	ECO	65 W
*3 Standby-Mode (W)		0.20 W
*4 Off Mode (W)		0.17 W
*5 Annual Energy Consumption (kWh)		119kWh
*6 Annual Energy Consumption Energy-Save-Mode (kWh)	ECO	95kWh

***1** Measured according to IEC 62087 Ed. 2.
***2** For further information about the Energy Save function, please see related pages in this operation manual.
***3** Measured according to IEC 62301 Ed. 1.
***4** Measured according to IEC 62301 Ed. 1.
***5** Annual energy consumption is calculated on the basis of the On-Mode (HOME MODE) power consumption, watching TV 4 hours a day, 365 days a year.
***6** Annual energy consumption is calculated on the basis of the Energy-Save-Mode power consumption, watching TV 4 hours a day, 365 days a year.

NOTE
• The power consumption of On-Mode varies depending on the images the TV displays.

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction. Storage temperature: –20°C to +60°C.

- As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

IMPORTANT SERVICE SAFETY PRECAUTION

Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

> **CAUTION**: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE
> F101, F102 (T3.15AH / 250V)

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

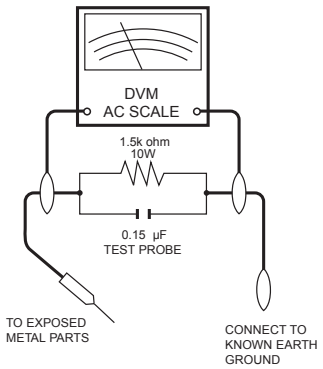
• Plug the AC cord directly into a 220~240 volt AC outlet. (Do not use an isolation transformer for this test).

•Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.

- •A true RMS reading multimeter should be used for this test, especially where the equipment uses a switch mode power supply which may result in very non-sinusoidal leakage current.
- •Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)

Any reading of 1.05V peak (this corresponds to 0.7 mA. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠".

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

1 Employing lead-free solder

"ALL PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.
Example:

Indicates lead-free solder of tin, silver and copper.

Indicates lead-free solder of tin, silver and nickel.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.
As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.
Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.
If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.
When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing.

Part No.	★	Description	Code
ZHNDAi123250E	J	ϕ0.3mm 250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm 500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm 1kg(1roll)	BM

END OF LIFE DISPOSAL

Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.
Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.
*) Please contact your local authority for further details.

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

2. In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.

The battery supplied with this product contains traces of Lead.

For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation. Please contact your local authority for details on the collection and recycling schemes.

For Switzerland: The used battery is to be returned to the selling point.

For other non-EU countries: Please contact your local authority for correct method of disposal of the used battery.

Remote control unit

1 ⏻ | **Standby/On**
Enter standby mode or turn on the power.

2 **Channel information / EPG**
(See pages 11 and 20.)

3 **DTV MENU**
Display the MEDIA PLAYER screen.

4 **0–9**
Set the channel in TV mode.
Set the page in Teletext mode.

When one of the 5 Nordic countries (Sweden, Norway, Finland, Denmark or Iceland) is selected in the country setting of Auto Installation, DTV channels are 4 digits. When another country is selected, DTV channels are 3 digits.

5 **Flashback**
Press to return to the previous selected channel or external input mode.

6 **DTV**
Change between ATV and DTV mode.

7 **Picture format**
Change between different picture formats (see page 20.)

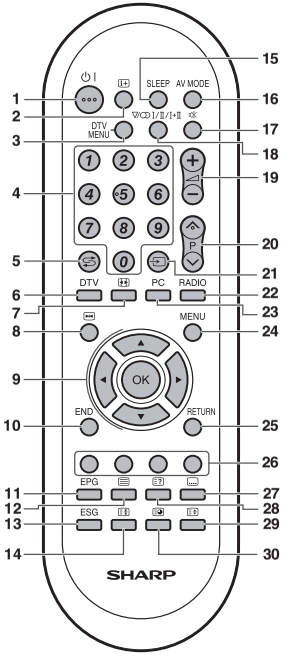
8 **Sound Mode / Timeshift**
DH500: Change between different sound modes established.
DH510: Activate or deactivate the Timeshift.

9 **▲/▼/◀/▶ (Cursor)**
Select a desired item on the setting screen.
OK
Execute a command within the menu screen.
TV/DTV: Display the programme list. (See page 20.)

10 **END**
Exit the menu screen.

11 **EPG**
DTV: To display EPG (Electronic Programme Guide) screen.
(See page 11.)

12 **Teletext**
ATV: Select the TELETEXT mode (See page 12.)
DTV: Select DTV (MHEG-5) data broadcasting or TELETEXT.



13 **ESG**
Show the favourite list.

14 **Freeze / Hold**
Freeze a picture (TV) or the Teletext on the screen (See page 12)

15 **SLEEP**
Set the sleep timer on (in units of 10 min. up to max. 4 hr) and off.

16 **AV MODE**
Select a picture mode (See page 17.)

17 **Mute**
Switch the sound on and off.

18 **Audio mode**
Select the sound multiplex mode. (See below.)

19 **(+/-) Volume**
(+) Increase the volume.
(-) Decrease the volume.

20 P (∧/∨)
TV/DTV: Select the program or move up or down the channel list pages.
Input source: Switch to TV or DTV input mode.
Teletext: Move to the next/previous page.

21 **Input source**
Select an input source.
(See page 10.)

22 **RADIO**
DTV: Switch between RADIO and DTV mode.
•Due to the large variation in transmitted volume levels in RADIO mode, some stations will produce distortion if the volume level is set too high.

23 **PC**
Not used.

24 **MENU**
Display the MENU screen.
(See page 16.)

25 **RETURN**
Not used.

26 **Colour (Red/Green/Yellow/Blue)**
TELETEXT: Select a page. (See page 12.)
DTV: The coloured buttons are used to select correspondingly to the coloured items in the menu screen.

27 **Subtitle for Teletext**
ATV: Subtitles on / off.
DTV: Display the subtitle selection screen. (See page 12.)

28 **Reveal hidden Teletext**
(See page 12.)

29 **Top/Bottom/Full**
Switch the Teletext image to Top, Bottom or Full.

30 **Subpage**
(See page 12.)

• Using Ⅰ/Ⅱ/Ⅰ+Ⅱ on the remote control unit

DTV mode:
Press Ⅰ/Ⅱ/Ⅰ+Ⅱ to open the multi audio screen. (See page 10.)

Analogue TV mode:
Each time you press Ⅰ/Ⅱ/Ⅰ+Ⅱ, the mode switches as illustrated in the following tables:

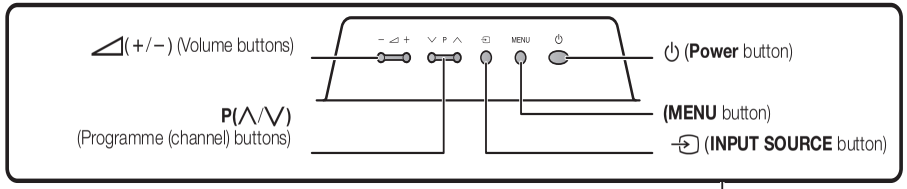
NICAM TV broadcasts selection

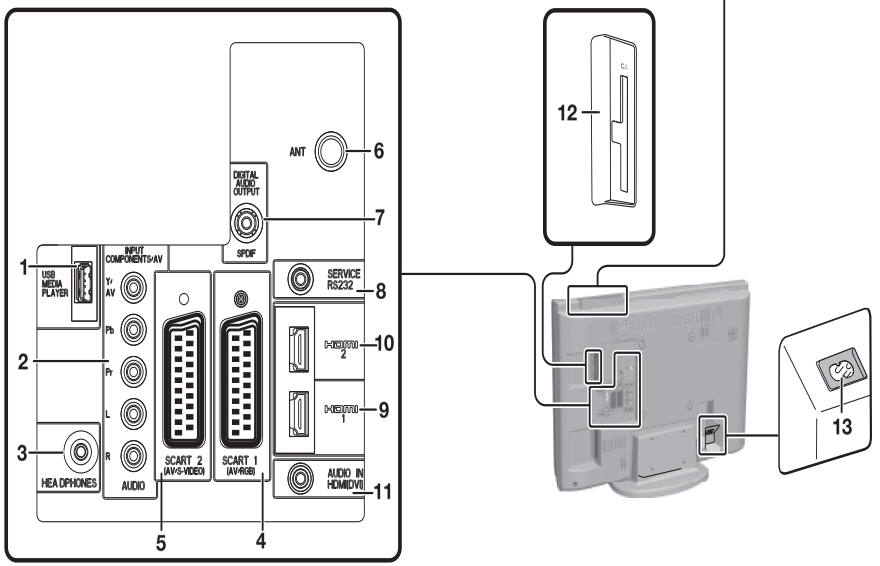
Singnal	Selectable items
Stereo	NICAM STEREO, MONO
Bilingual	NICAM CH A, NICAM CH B, NICAM CH AB, MONO
Monoaural	NICAM MONO, MONO

A2 TV broadcasts selection

Singnal	Selectable items
Stereo	STEREO, MONO
Bilingual	CH A, CH B, CH AB
Monoaural	MONO

TV (Top and rear view)





1 USB terminal
2 COMPONENTS / AV terminals
3 HEADPHONES jack
4 SCART 1 (AV/RGB) terminal
5 SCART 2 (AV/S-VIDEO) terminal
6 Antenna input terminal
7 OUTPUT (DIGITAL AUDIO) terminal
8 SERVICE connector (jack 3.5mm)
9 HDMI 1 (HDMI/AUDIO-DVI)
10 HDMI 2 (HDMI/AUDIO-DVI)
11 AUDIO input for DVI
12 COMMON INTERFACE slot
13 AC INPUT terminal

WARNING

- Excessive sound pressure from earphones and headphones can cause hearing loss.
- Do not set the volume at a high level. Hearing experts advise against extended listening at high volume levels.

Connecting external devices

Before connecting ...

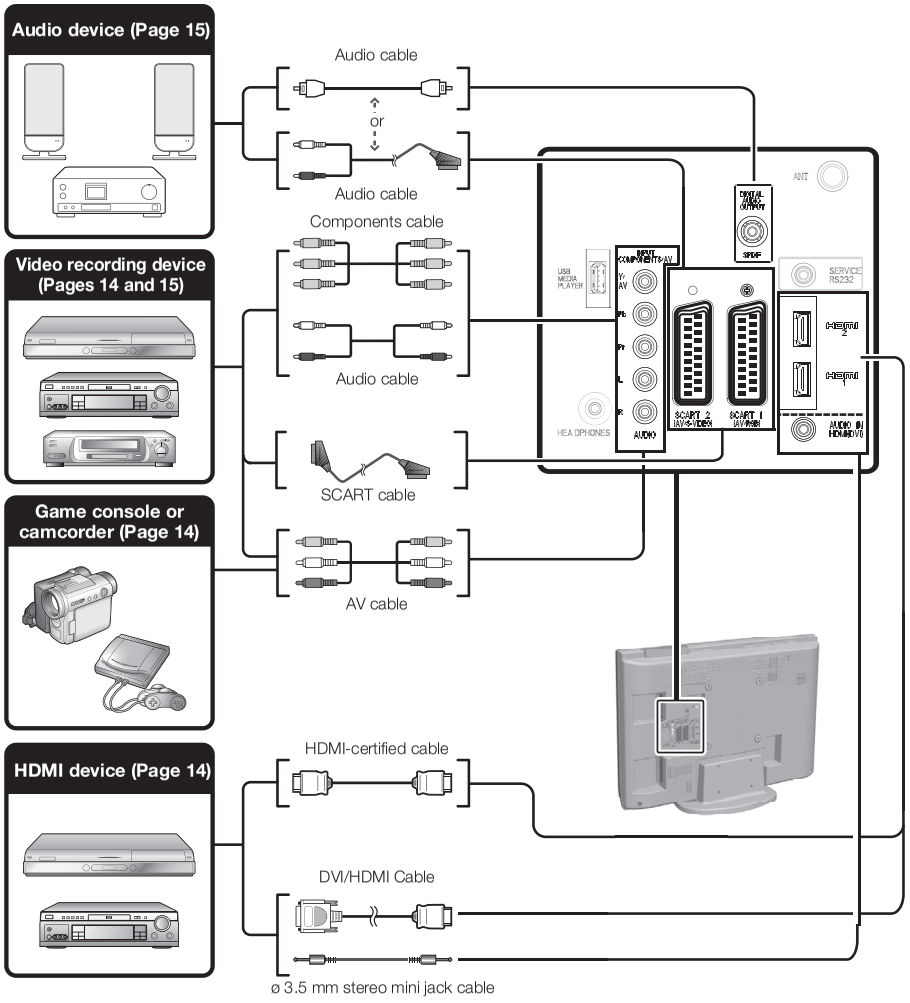
- Be sure to turn off the TV and any devices before making any connections.
- Firmly connect a cable to a terminal or terminals.
- Carefully read the operation manual of each external device for possible connection types. This also helps you get the best possible audiovisual quality to maximise the potential of the TV and the connected device.

Introduction to connections

The TV is equipped with the terminals as shown below. Find the cable corresponding the TV's terminal and connect the device.

NOTE

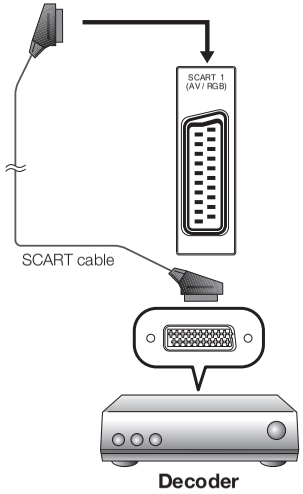
- The cables illustrated in pages 13, 14 and 15 are commercially available items.



SCART connection

Example of connectable devices

- VCR • Decoder (only SCART 1)
- DVD player/recorder

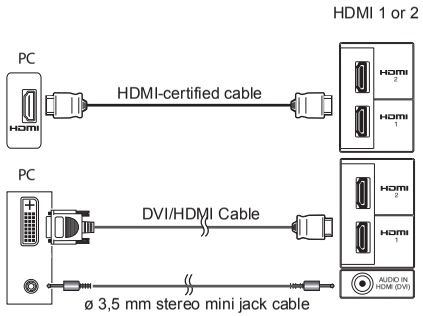


NOTE

- In cases when the decoder needs to receive a signal from the TV, make sure to select the appropriate input terminal to which the decoder is connected in "Input Source" (Page 10).

PC connection through HDMI (DVI)

HDMI (DVI) Connection



After connection

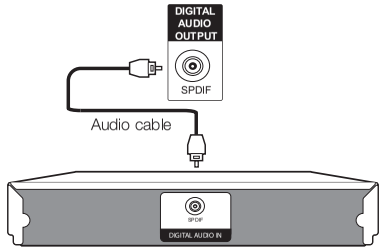
- If after connecting a PC to the TV through a HDMI cable, the audio does not run, connect a mini stereo connector of ø 3.5mm between TV and PC as indicated in the previous drawing.
- When a PC is connected to the TV with a DVI cable, it will be necessary to connect a mini stereo connector of ø 3.5mm of the TV to PC as indicated in the previous drawing

Speaker/amplifier connector

Example of connectable devices

- Connecting an amplifier with digital audio input

Connect an amplifier with external speakers as shown below.



Amplifier with digital audio input

After connecting

Digital audio output setting

After connecting an amplifier with digital audio input and external speakers as shown, you should set an audio output format compatible with the programme you are watching or the device connected.

Go to "MENU" > "SOUND" > "SPDIF Mode" > select "PCM" or "Dolby Digital".

NOTE

- When you set this to "Dolby Digital", and you receive the Dolby Digital or Dolby Digital Plus audio formats, Dolby Digital audio is output. Otherwise, PCM audio is output.
  When you set this to "PCM", PCM audio is output no matter what audio formats you receive.

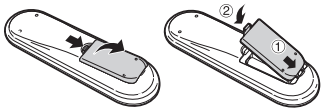
Inserting the batteries

Before using the TV for the first time, insert two supplied “AA” size zinc-carbon batteries. When the batteries become depleted and the remote control unit fails to operate, replace the batteries with new “AA” size batteries.

1 Hold in the tab on the battery cover and pull the cover towards the direction of the arrow.

2 Insert two supplied “AA” size batteries.
- Place batteries with their terminals corresponding to the (+) and (-) indications in the battery compartment.

3 Close the battery cover.



CAUTION

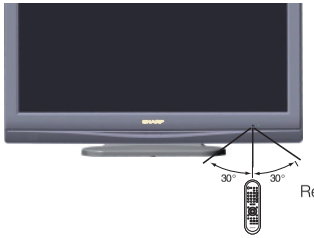
Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.

Note on disposing batteries:

The batteries provided contain no harmful materials such as cadmium, lead or mercury.
Regulations concerning used batteries stipulate that batteries may no longer be thrown out with the household rubbish. Deposit any used batteries free of charge into the designated collection containers set up at commercial businesses.

Using the remote control unit

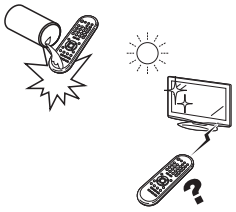
Use the remote control unit by pointing it towards the remote control sensor. Objects between the remote control unit and sensor may prevent proper operation.



Remote control sensor

Cautions regarding the remote control unit

- Do not expose the remote control unit to shock. In addition, do not expose the remote control unit to liquids, and do not place in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight. The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote control sensor of the TV is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or the TV, or operate the remote control unit closer to the remote control sensor.



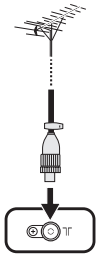
Quick guide

Initial installation overview

Follow the steps below one by one when using the TV for the first time. Some steps may not be necessary depending on your TV installation and connection.

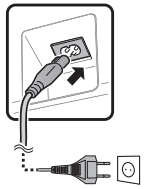
1 Preparation

❶ Connect an antenna cable to the antenna terminal (Page 8).



❷ If necessary, insert a CA card into the CI slot to watch scrambled broadcasts (Page 8.)

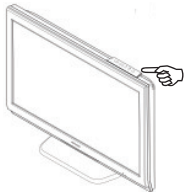
❸ Connect the AC cord to the TV (Page 8).



Product shape varies in some countries.

2 Power on and run the auto installation

❶ Turn on the power using ⏻ on the TV (Page 10).



❷ Run the initial auto installation (Page 9).

✓Language and country setting

✓TV Location setting

⬇

Start searching channels

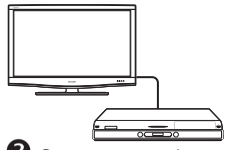
3 Watch TV

❶ **Congratulations! Now you can watch TV.**

❷ If necessary, adjust the antenna to attain maximum signal reception (Page 9).

Connect external devices

❶ Connect external devices such as a DVD player/recorder as instructed (Pages 14 and 15).



❷ Connect external audio devices such as speakers/amplifier as instructed (Pages 14 and 15).

Other useful features

Setting when using external devices

Input source settings

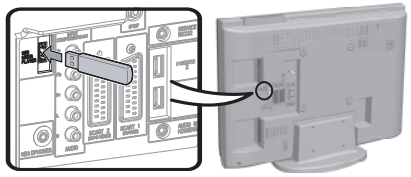
For selecting the input type of external equipment

SCART 1: CVBS, RGB
SCART 2: Y/C, CVBS

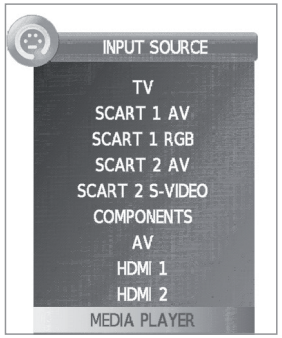
- If no (colour) image is displayed, try changing to another signal type.
- Check the operations manual of the external equipment for the signal type.

Connecting a USB device (Media Player)

Connect an USB device to the TV as shown below.



- Depending on the USB device, the TV may not be able to recognise the contained data.
- Use only alphanumeric characters for naming files.
- File names over 80 characters (may vary depending on character set) may not be displayed.
- Do not disconnect a USB device or memory card from the TV while transferring files, using the slide show function, when a screen is switching to another or before you exit “MEDIA PLAYER” from the “INPUT SOURCE” menu.
- Compatibility with USB hard disc connection.
- Do not connect and disconnect a USB device from the TV repeatedly.



MEDIA PLAYER function

After selecting Media Player, the TV loads USB device files, and shows the following screen:

1 Pressing ◄/► buttons you can change between different modes: **PHOTO**, **MUSIC**, **MOVIE** or **TEXT**. Press **OK** to select the option you want to reproduce.

2 Press ▲/▼/◄/► to select the folder where you want to search the files and then press **OK**.

PHOTO mode

You can reproduce photos with JPG, JPEG and BMP format on your TV.
Several kinds of reproduction are possible.

1 Select **PHOTO** mode and press **OK**.
2 Select the file you want to display on full screen with ▲/▼ /◄/► buttons and press **OK** to start the viewing.

Appendix

Troubleshooting

Problem	Possible Solution
• No power.	• Check if you pressed ⏻ | on the remote control unit. If the indicator on the TV lights up red, press ⏻ |. • Is the AC cord disconnected? • Check if you pressed ⏻ on the TV.
• The TV cannot be operated.	• External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the TV after first turning off the power, or unplugging the AC cord and re-plugging it in after one or two minutes.
• Remote control unit does not operate.	• Are batteries inserted with polarity (+, −) aligned? • Are batteries worn out? (Replace with new batteries.) • Are you using it under strong or fluorescent lighting? • Is a fluorescent light illuminating to the remote control sensor?
• Picture is cut off.	• Is the image position correct? • Are screen mode adjustments (Aspect ratio) such as picture size made correctly? (Page 20.)
• Strange colour, light colour, or dark colour, or colour misalignment.	• Adjust the picture tone. • Is the room too bright? The picture may look dark in a room that is too bright. • Check the “PICTURE” setting (Page 17).
• Power is suddenly turned off.	• The TV’s internal temperature has increased. Remove any objects blocking the vent or clean. • Is the “Sleep Timer” set? Select “Off” from the “TIME” menu (Page 18). • Is “No Signal Off” or “No operation Off” activated?
• No picture.	• Are connections to external equipment correct? (Pages 13, 14 and 15) • Is the input signal type selected correctly after connection? (Page 10) • Is the correct input source selected? (Page 10) • Is the picture adjustment correct? (Pages 17) • Is the antenna connected properly? (Page 8)
• No sound.	• Is the volume too low? • Make sure that headphones are not connected. • Check if you pressed 🔇 on the remote control unit.
• The TV sometimes makes a cracking sound.	• This is not a malfunction. This happens when the cabinet slightly expands and contracts according to changes in temperature. This does not affect the TV’s performance.

Cautions regarding use in high and low temperature environments

- When the TV is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the TV will recover when the temperature returns to normal.
- Do not leave the TV in a hot or cold location. Also, do not leave the TV in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
  Storage temperature: -20 °C to +60 °C.

Information on the software license for this product

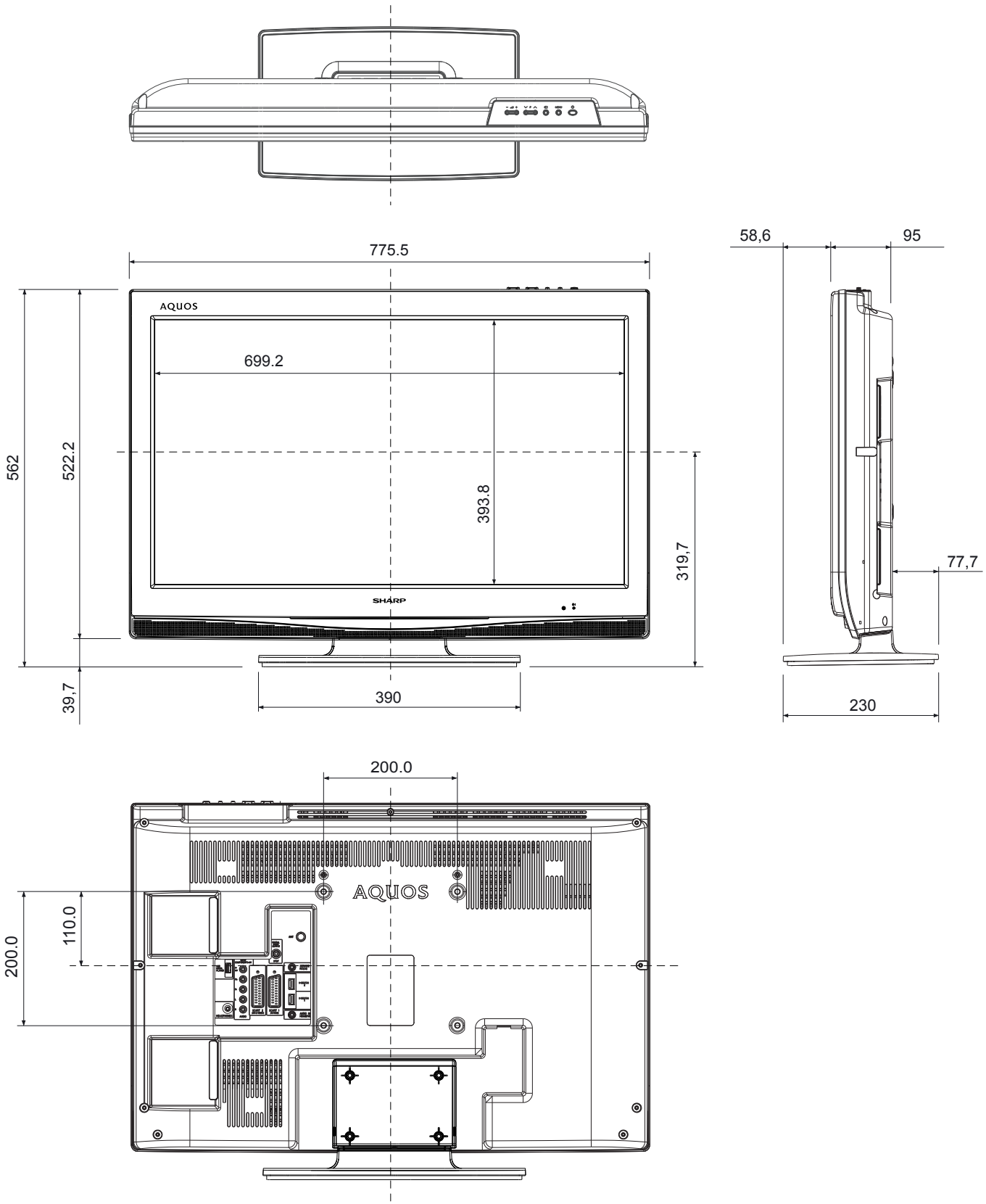
Software composition

The software included in this product is comprised of various software components whose individual copyrights are held by SHARP or by third parties.

Software developed by SHARP and/or third part

The copyrights for the software components and various relevant documents included with this product that were developed or written by SHARP are owned by SHARP and are protected by the Copyright Act, international treaties, and other relevant laws. This product also makes use of freely distributed software and software components whose copyrights are held by third parties.

DIMENSIONS

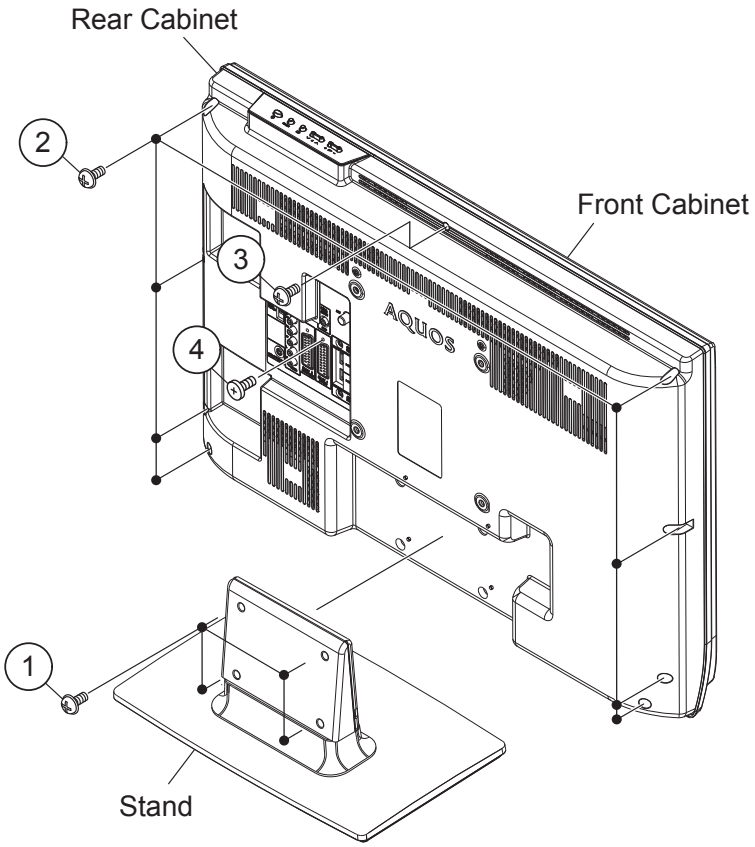

775.5
AQUOS
699.2
562
522.2
393.8
319,7
SHARP
39,7
390
58,6
95
77,7
230
200.0
AQUOS
110.0
200.0

REMOVING OF MAJOR PARTS

CHAPTER 2. REMOVING OF MAJOR PARTS

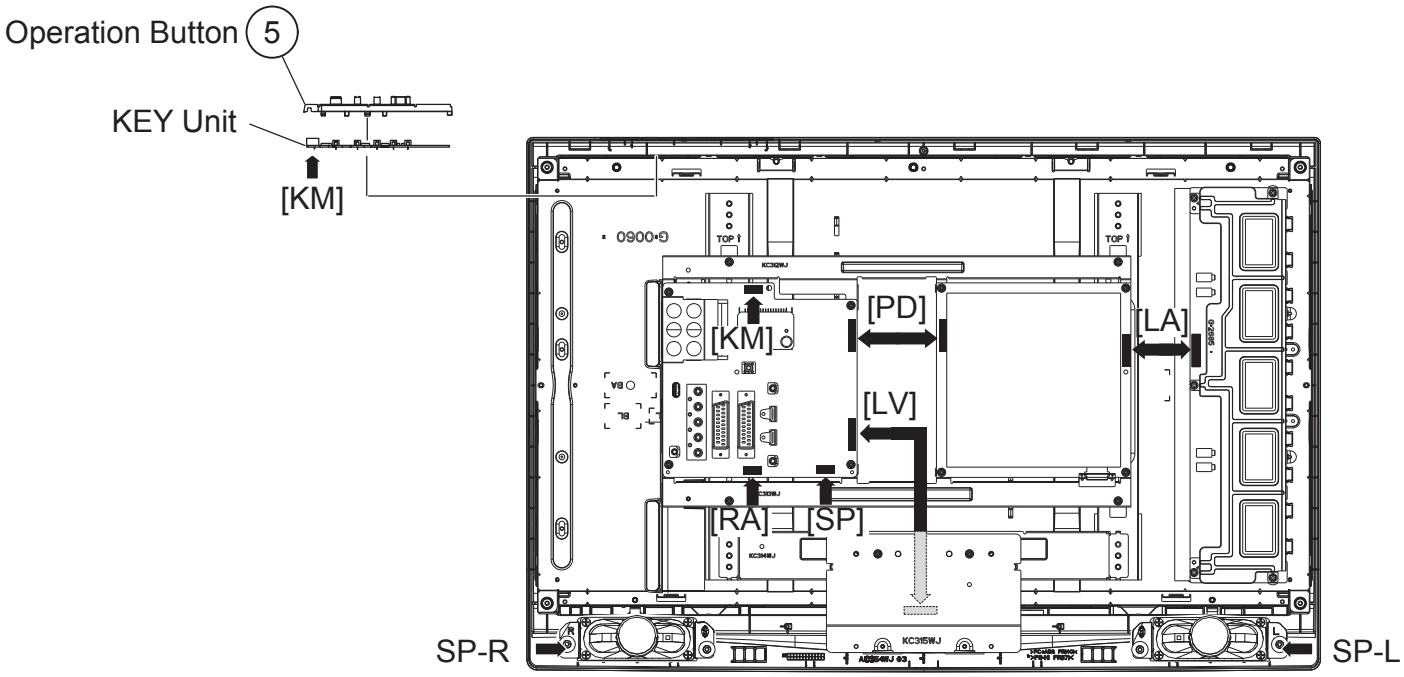
[1] REMOVING OF MAJOR PARTS

1. Remove the 4 lock screws ① and detach the Stand.
2. Remove the 8 lock screws ②, 1 lock screws ③, 1 lock screw ④ and detach the Rear Cabinet.



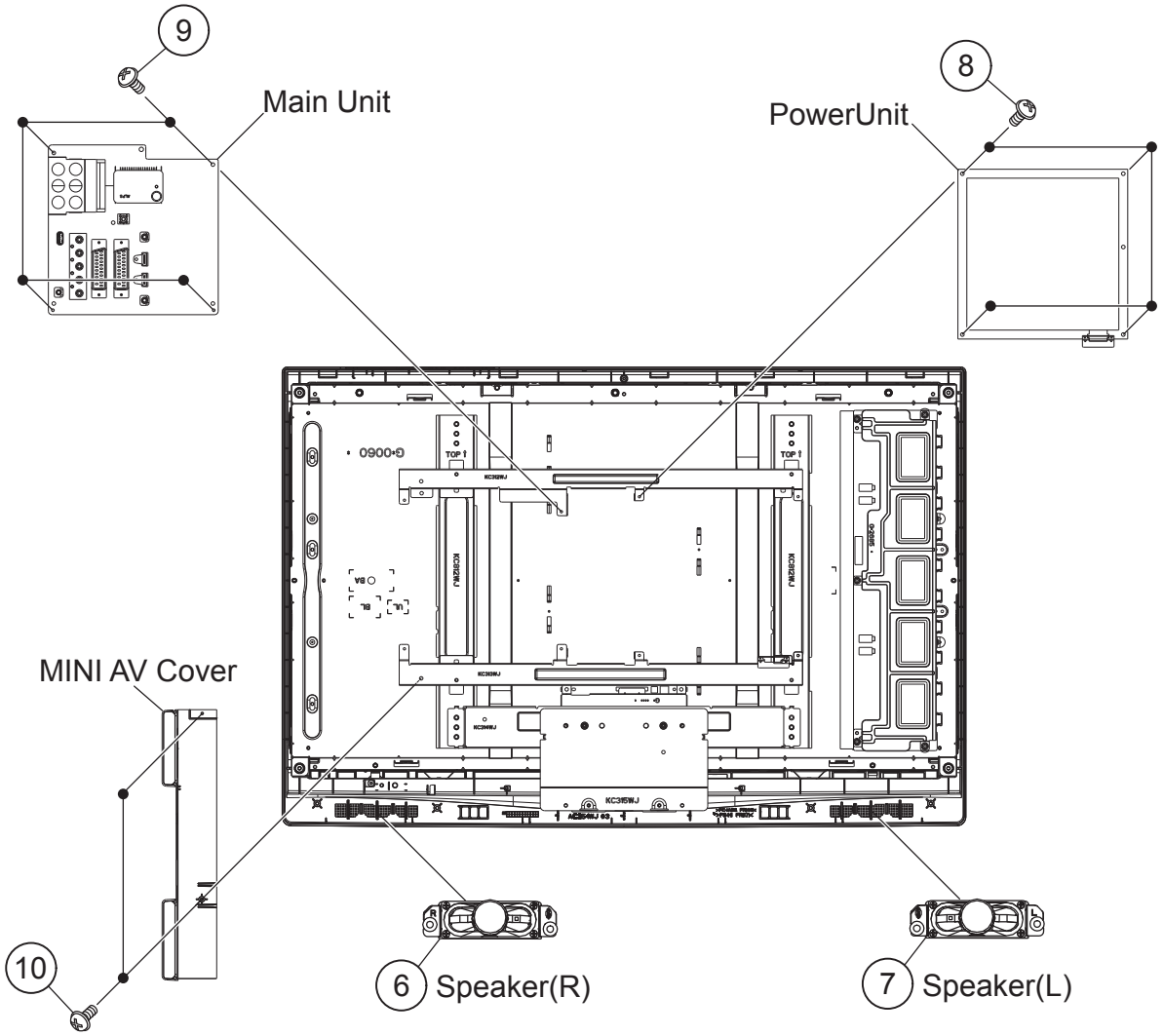
Removing of major parts (Continued)

3. Disconnect all the connectors from all the PWBs.
4. Remove the KEY Unit Ass'y ⑤ .



Removing of major parts (Continued)

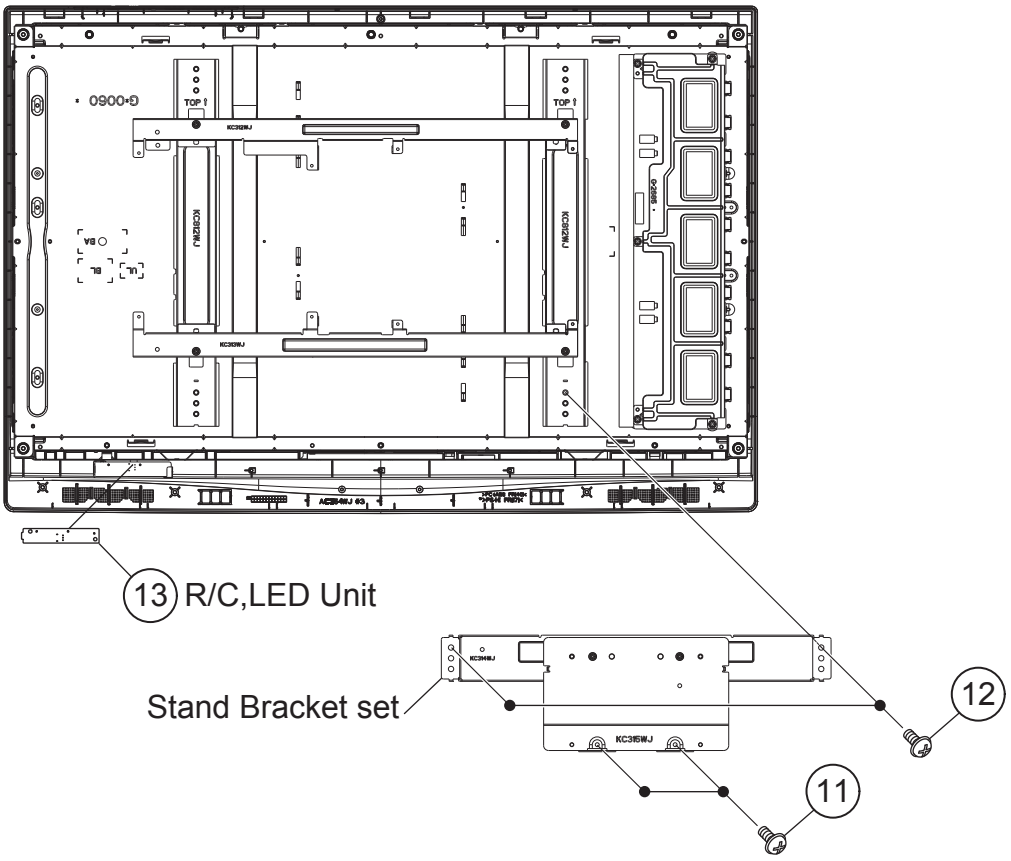
5. Remove the Speaker (R) ⑥, (L) ⑦.
6. Remove the 4 lock screws ⑧ and detach the POWER Unit.
7. Remove the 4 lock screws ⑨, and detach the MAIN Unit.
8. Remove the 2 lock screws ⑩ and detach the MINI AV Cover.



Removing of major parts (Continued)

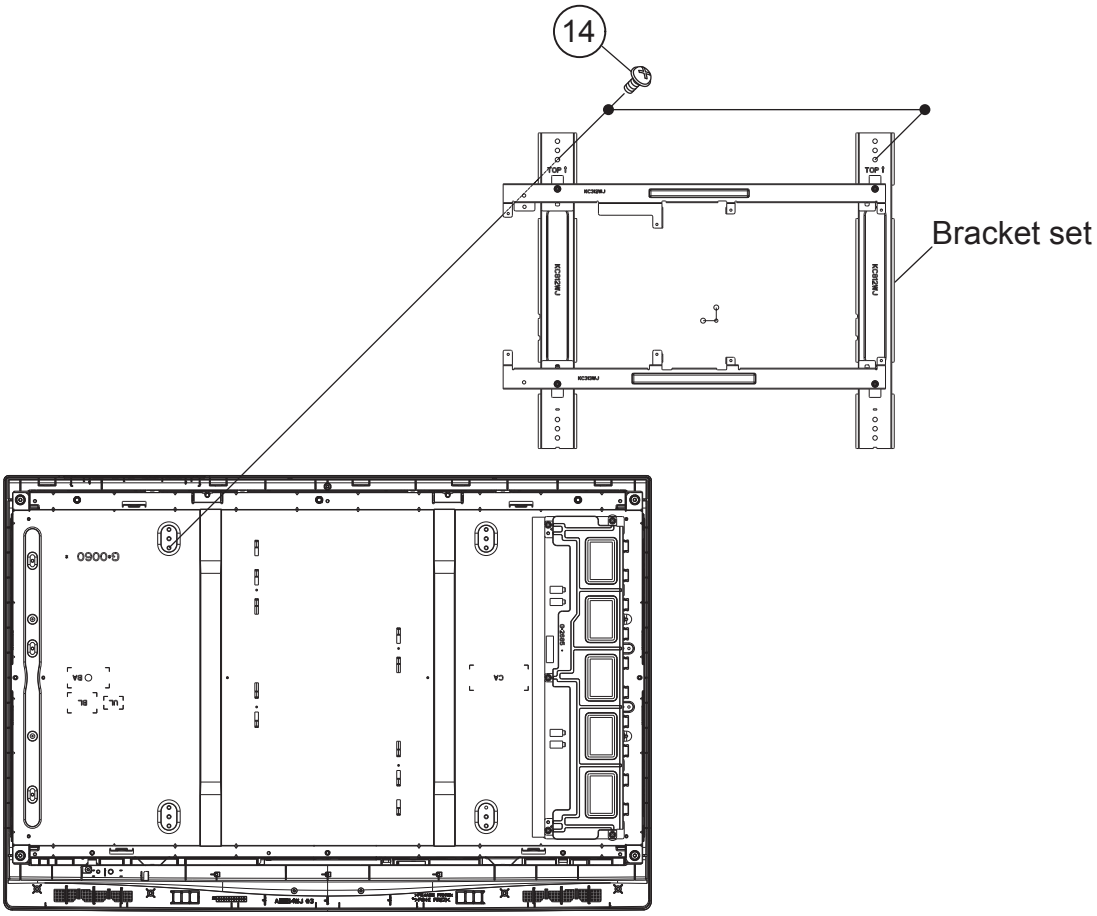
9. Remove the 2 lock screws ⑪ , 2 lock screws ⑫ and detach the Stand Bracket set.

10. Remove the R/C, LED Unit ⑬.



Removing of major parts (Continued)

11.Remove the 2 lock screws ⑭ and detach the Bracket set.



SERVICE ADJUSTMENTS

1. Adjustment method after PWB and/or IC replacement due to repair

The unit is set to the optimum at the time of shipment from the factory.

If any value should become improper or any adjustment is necessary due to the part replacement, make an adjustment according to the following procedure.

1.1. Procure the following units in order to replace the main unit:

MAIN UNIT **DUNTKF261FMxx**

NOTE: [Caution when replacing ICs in the main unit (IC1901, IC1902, IC1006 and IC1007)]

Before replacing the relevant part, procure the following parts in which the data have been rewritten.

Ref.	Description	Parts code IC + data	Description new IC code for service
IC1901	HDMI EDID 1	RH-IXD041WJZZY	VHIM24C02W61EY AND DATA LC32DH500E_HDMI_1_EDID
IC1902	HDMI EDID 2	RH-IXD042WJZZY	VHIM24C02W61EY AND DATA LC32DH500E_HDMI_2_EDID
IC1006	HDCP USER SETTINGS	RH-IXD043WJZZY	RH-IXC986WJZZY AND DATA LC32DH500E_HDCP_KEY
IC1007	FLASH MEMORY	RH-IXD147WJZZY	RH-IXD012WJZZY AND LC32DH510E_MERGE_V1.23

2. Entering and exiting the adjustment process mode. Standard method.

1. By key-unit.
   1. Unplug the AC power cord.
   2. Press and hold “V-” and “⏎” keys, simultaneously, and then plug the AC power cord.
   3. “K” appears on the screen.
   4. Press and hold “V-” and “P-” keys, simultaneously.
   5. “SHARP FACTORY MENU” appears (see Figure 1).
   6. Unplug the AC power cord to exit of adjustments process.
2. By own R/C
   1. Turn on the TV set.
   2. Press “⏎”,”2”,”5”, “8”, “0” (the time is limited to 5 sec. approx., for enter this code).
   3. “SHARP FACTORY MENU” appears (see Figure 1).
   4. Press “OK” on lines 5 ~ 12 to go to submenu.
   5. Press “MENU” to return to main menu.
   6. Press “END” to exit of adjustments mode.

3. Remote control key operation and description of display in adjustment process mode.

1. key operation

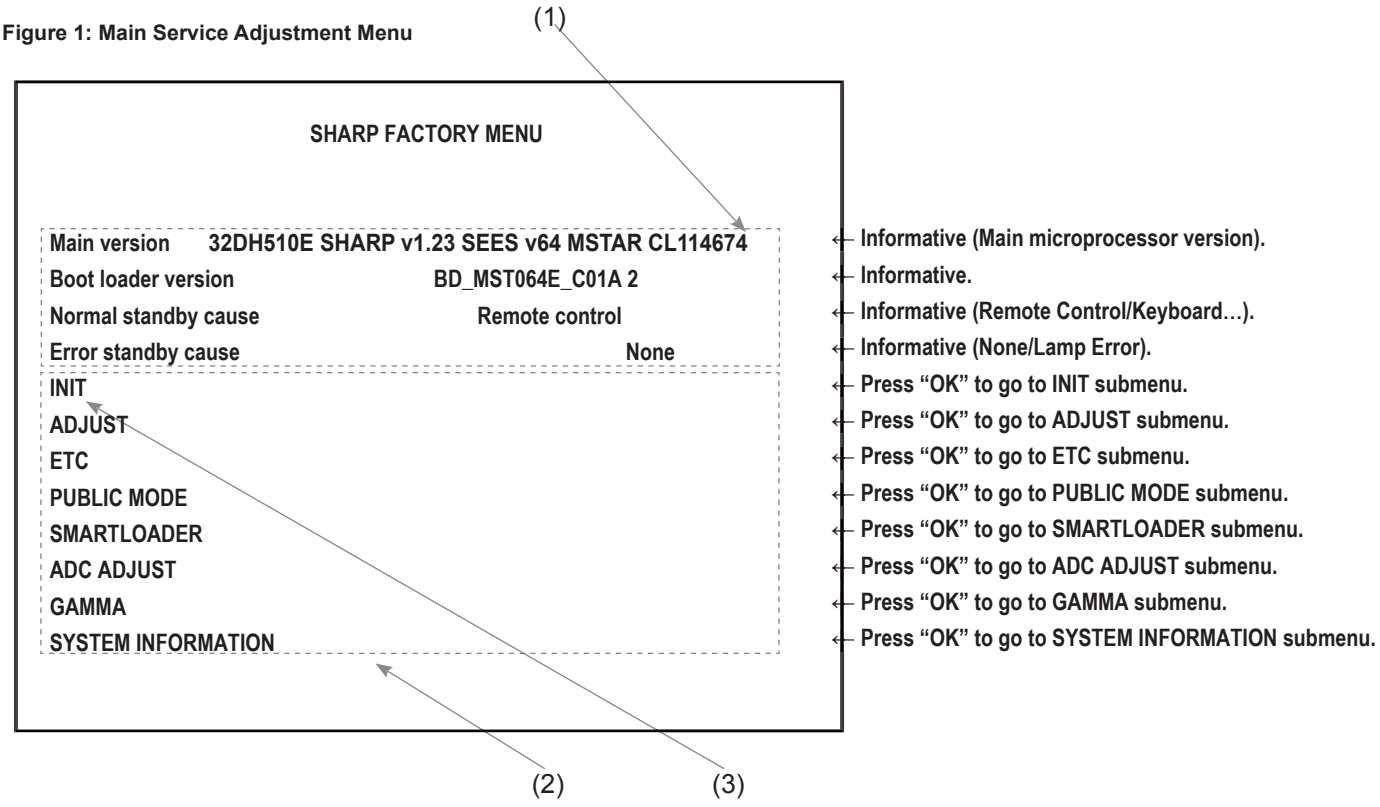
Remote control key	Keyboard unit	Function
Cursor (▼/▲)	P (⋁/⋀)	Moving an item (line) by one (up/down) on “Sharp Factory Menu” or submenus.
OK	⏎	Selecting a submenu on lines 5 to 12 of “Sharp Factory Menu” or executing a function.
Cursor (◄/►)	V (+/-)	Changing a selected item setting value.
MENU	MENU	Return to “Sharp Factory Menu” from a submenu.

The required input mode should be switched previously to enter the Service Mode.

CAUTION: Use due care in handling the information described here lest the users should know how to enter the adjustment process mode. If the settings are tampered with in this mode, unrecoverable system damage may result.

4. Description of display

Figure 1: Main Service Adjustment Menu



No.	Description	Display specification
(1)	Service Information	Current Software version and others.
(2)	Item name	Submenus to be checked or adjusted (by pressing “OK” button)
(3)	Factory init and Inch setting	Are shown on INIT submenu

5. Adjustment process mode menu

Page	Line	Sub Page	Item	Description	Remarks (adjustment details, etc.)
01/17	[SHARP FACTORY MENU				
	1		Main Version	32DH510E SHARP v1.23 SEES v64 MSTAR CL114674	Informative only (Main microprocessor version)
	2		Bootloader Version	BD_MST064E_C01A	Informative only
	3		Normal Standby Cause	Remote Control / Keyboard...	Informative only
	4		Error Standby Cause	None / Lamp Error	Informative only
	5		INIT	Factory Init Submenu	Press “OK” to enter to Factory Init Submenu
		02/17	Factory Init	EURO	Informative (EURO/RUSSIA/SWEDEN/UK/EAST EUROPE)
			Inch Setting	**SH32_LK315T3LA57**	Panel type
			Center Acutime	64 H 40 M	
			RESET	“OK” Will be displayed	Press “◄“ or “ ►” to reset (“OK” will be displayed)
	6		ADJUST	QMAP ADJUST Submenu	Press “OK” to enter to QMAP ADJUST Submenu
		03/17	INPUT SOURCE (1/6)	DTV/ RF/Multimedia ...	
			AFEC		Only for Engineering purpose (Please don’t use)
			Comb		Only for Engineering purpose (Please don’t use)
			SECAM		Only for Engineering purpose (Please don’t use)
			SCinit		Only for Engineering purpose (Please don’t use)
			CSC	OFF	Only for Engineering purpose (Please don’t use)
			CSC_Dither	OFF	Only for Engineering purpose (Please don’t use)
			YCdelay	OFF	Only for Engineering purpose (Please don’t use)
			PreFilter	Fir 66	Only for Engineering purpose (Please don’t use)
			HSD_Y	ALL PASS1X	Only for Engineering purpose (Please don’t use)
			HSD_C	ALL PASS1X	Only for Engineering purpose (Please don’t use)
			VSD	OFF	Only for Engineering purpose (Please don’t use)
			CTI	CTI_0	Only for Engineering purpose (Please don’t use)
		04/17	INPUT SOURCE (2/6)	DTV/ RF/Multimedia ...	
			MemFormat	422MF	Only for Engineering purpose (Please don’t use)
			444To422	ON	Only for Engineering purpose (Please don’t use)
			PreSNR	PS-3	Only for Engineering purpose (Please don’t use)
			DNR	ON	Only for Engineering purpose (Please don’t use)
			DNR_Motion	MR_NR	Only for Engineering purpose (Please don’t use)
			DNR_Y	DY-3	Only for Engineering purpose (Please don’t use)
			NDR_MED	OFF	Only for Engineering purpose (Please don’t use)
			DNR_C	DC-3	Only for Engineering purpose (Please don’t use)
			PNR	AVG-ON	Only for Engineering purpose (Please don’t use)
			PNR_Y	OFF	Only for Engineering purpose (Please don’t use)
			PNR_C	OFF	Only for Engineering purpose (Please don’t use)
			PostCSS	OFF	Only for Engineering purpose (Please don’t use)
		05/17	INPUT SOURCE (3/6)	DTV/ RF/Multimedia ...	
			PostCSS_Smooth	PCS_6	Only for Engineering purpose (Please don’t use)
			420CUP	ON	Only for Engineering purpose (Please don’t use)
			MADi	25_4R	Only for Engineering purpose (Please don’t use)
			MADi_Motion	MOT_4R_5	Only for Engineering purpose (Please don’t use)
			MADi_ADP3x3	ADP1	Only for Engineering purpose (Please don’t use)
			MADi_MORPHO	M1	Only for Engineering purpose (Please don’t use)
			MADi_DFK	DFK1	Only for Engineering purpose (Please don’t use)

Page	Line	Sub Page	Item	Description	Remarks (adjustment details, etc.)
1/17	[SHARP FACTORY MENU				
	6		ADJUST (continued)	QMAP ADJUST Submenu	Press “OK” to enter to QMAP ADJUST Submenu
		05/17	INPUT SOURCE (3/6)	DTV/ RF/Multimedia ...	
			MADi_SST	SST1	Only for Engineering purpose (Please don’t use)
			MADi_Force	OFF	Only for Engineering purpose (Please don’t use)
			EODi	SD_8	Only for Engineering purpose (Please don’t use)
			Film	SD_2	Only for Engineering purpose (Please don’t use)
			Film32	OFF	Only for Engineering purpose (Please don’t use)
		06/17	INPUT SOURCE (4/6)	DTV/ RF/Multimedia ...	
			Film22	SD_DTV	Only for Engineering purpose (Please don’t use)
			DIPF	DIPF1	Only for Engineering purpose (Please don’t use)
			VCLPF	ON	Only for Engineering purpose (Please don’t use)
			Spike_NR	S2	Only for Engineering purpose (Please don’t use)
			SPF	ON	Only for Engineering purpose (Please don’t use)
			SPF_DBK	OFF	Only for Engineering purpose (Please don’t use)
			SPF_SNR	E2S1	Only for Engineering purpose (Please don’t use)
			SPF_DBK_SNR_MR	ON	Only for Engineering purpose (Please don’t use)
			SPF_MR_LPF	LPF3x3	Only for Engineering purpose (Please don’t use)
			SPF_SMR	S2	Only for Engineering purpose (Please don’t use)
			SPF_NMR_MR	ON	Only for Engineering purpose (Please don’t use)
			DMS	S2	Only for Engineering purpose (Please don’t use)
		07/17	INPUT SOURCE (5/6)	DTV/ RF/Multimedia ...	
			VSP_Y	SRAM_1_4Tap	Only for Engineering purpose (Please don’t use)
			VSP_C	ROM_121	Only for Engineering purpose (Please don’t use)
			VSP_CoRing	Y_Coring_1	Only for Engineering purpose (Please don’t use)
			VSP_DeRing	OFF	Only for Engineering purpose (Please don’t use)
			VSP_Dither	OFF	Only for Engineering purpose (Please don’t use)
			VSP_PreVBound	OFF	Only for Engineering purpose (Please don’t use)
			HSP_Y	SRAM_1_4Tap	Only for Engineering purpose (Please don’t use)
			HSP_C	ROM_121	Only for Engineering purpose (Please don’t use)
			HSP_CoRing	Y_Coring_1	Only for Engineering purpose (Please don’t use)
			HSP_DeRing	OFF	Only for Engineering purpose (Please don’t use)
			HSP_Dither	OFF	Only for Engineering purpose (Please don’t use)
			HnonLinear	OFF	Only for Engineering purpose (Please don’t use)
		08/17	INPUT SOURCE (6/6)	DTV/ RF/Multimedia ...	
			SRAM1	InvSinc4Tc4p4Fc85 Fstop134Astop50	Only for Engineering purpose (Please don’t use)
			SRAM2	InvSinc6Tc4p4Fc94 Fstop134Astop60	Only for Engineering purpose (Please don’t use)
			422To444	ON	Only for Engineering purpose (Please don’t use)
			Peaking	DT_MPEG2_576i	Only for Engineering purpose (Please don’t use)
			SwDriver	ALL	Only for Engineering purpose (Please don’t use)
			VIP_CSC	OFF	Only for Engineering purpose (Please don’t use)
			VIP_CSC_Dither	OFF	Only for Engineering purpose (Please don’t use)
			Color	Multimedia_photo_HD	Only for Engineering purpose (Please don’t use)
			3x3	OFF	Only for Engineering purpose (Please don’t use)
			Display	ALL	Only for Engineering purpose (Please don’t use)
			Post_CON_BRI	OFF	Only for Engineering purpose (Please don’t use)

Page	Line	Sub Page	Item	Description	Remarks (adjustment details, etc.)
01/17	[SHARP FACTORY MENU				
	7		ETC	EEP, Autoinstallation, Option, Country, L Error...	Press “OK” to enter to ETC Submenu
		09/17	EEP Clear		**Clear NVM data**
			EEP Clear B		**Clear NVM data (except adjustments area).**
			Standby Cause Reset		**Reset of STANDBY CAUSE.**
			Autoinstallation SW	Off	**On: Pending to execute on next power on. Off: Not required.**
			Pattern	0	**Selection of internal pattern from 0 up to 6…**
			L Error Reset	0	**LAMP ERR RESET Initialization of L_ERR.**
			L Error Check	On	**L_ERR detection. 0: activated. 1: deactivated.**
			I2C OFF	Off	**I2C BUS status. On: free BUS. Off: Normal.**
			Sharp protocol	On	**Remote Control Protocol. On: SHARP Off: MSTAR.**
	8		PUBLIC MODE (1/2)	PUBLIC MODE Submenu	Press “OK” to enter to PUBLIC MODE Submenu
		10/17	Power On Fixed	Variable	**Press “◀” or “▶” to change Variable/Fixed.**
			Maximum Volume	60	**Press “◀” or “▶” to change 0/60.**
			Volume Fixed	Variable	**Press “◀” or “▶” to change Variable/Fixed.**
			Volume Fixed Level	20	**Press “◀” or “▶” to change 0/60.**
			RC Button	Respond	**Press “◀” or “▶” to change Respond/No respond.**
			Panel Button	Respond	**Press “◀” or “▶” to change Respond/No respond.**
			Menu Button	Respond	**Press “◀” or “▶” to change Respond/No respond.**
			On Screen Display	On	**Press “◀” or “▶” to change On/Off.**
			Input Mode Start	Normal	**Press “◀” or “▶” to change Normal/TV/SCART1/…**
			Input Mode Fixed	Variable	**Press “◀” or “▶” to change Variable/Fixed.**
			Input TV mode program numbers	Normal	
			RC path through	Off	**Press “◀” or “▶” to change On/Off (required external module)**
			PUBLIC MODE (2/2)	PUBLIC MODE Submenu	
		11/17	Hotel mode	Off	**Press “◀” or “▶” to change On/Off.**
			Reset		**Press “◀” or “▶” to return to factory settings.**
			Execute		**Press “◀” or “▶” to confirm (“OK” will be displayed).**
	9		SMART LOADER	SMART LOADER Submenu	Press “OK” to enter to SMART LOADER Submenu
		12/17	Save settings to USB		**Press “◀” or “▶” to Save. (“OK” or “NO USB drive available, please check and/or insert USB dri…” will be displayed).**
			Load settings from USB		**Press “◀” or “▶” to Load. (“OK, reboot TV set” or “NO USB drive available, please check and/or insert USB dri…” will be displayed).**
	10		ADC ADJUST	ADC ADJUST Submenu	Press “OK” to enter to ADC ADJUST Submenu
		13/17	MODE	YPbPr(SD)	**Press “◀” or “▶” to change RGB/YPbPr(SD)/ YPbPr(HD).**
			ADJUST	External singal	**Press “◀” or “▶” to change Internal signal/External signal. External: factory. Internal: service**
			R-GAIN	80	**Press “◀” or “▶” for manual adjustment.**
			G-GAIN	70	**Press “◀” or “▶” for manual adjustment.**

Page	Line	Sub Page	Item	Description	Remarks (adjustment details, etc.)
01/17	[SHARP FACTORY MENU				
			ADC ADJUST (continued)	ADC ADJUST Submenu	Press “OK” to enter to ADC ADJUST Submenu
	10	13/17	B-GAIN	80	**Press “◀” or “▶” for manual adjustment.**
			R-OFFSET	128	**Press “◀” or “▶” for manual adjustment.**
			G-OFFSET	128	**Press “◀” or “▶” for manual adjustment.**
			B-OFFSET	128	**Press “◀” or “▶” for manual adjustment.**
			AUTO ADC		**Press “▶” for automatic adjustment in each mode.**
	11		GAMMA (1/3)	GAMMA Submenu	Press “OK” to enter to GAMMA Submenu
		14/17	MGAMMA IN1	40	**W/B adjustment, gradation 1 input setting.**
			MGAMMA IN2	80	**W/B adjustment, gradation 2 input setting.**
			MGAMMA IN3	120	**W/B adjustment, gradation 3 input setting.**
			MGAMMA IN4	160	**W/B adjustment, gradation 4 input setting.**
			MGAMMA IN5	200	**W/B adjustment, gradation 5 input setting.**
			MGAMMA IN6	240	**W/B adjustment, gradation 6 input setting.**
			MGAMMA WRITE		**EEP writing of adjustment values.**
			GAMMA (2/3)	GAMMA Submenu	
		15/17	MGAMMA R1	164	**W/B adjustment, gradation 1R adjustment value.**
			MGAMMA G1	169	**W/B adjustment, gradation 1G adjustment value.**
			MGAMMA B1	191	**W/B adjustment, gradation 1B adjustment value.**
			MGAMMA R2	319	**W/B adjustment, gradation 2R adjustment value.**
			MGAMMA G2	327	**W/B adjustment, gradation 2G adjustment value.**
			MGAMMA B2	366	**W/B adjustment, gradation 2B adjustment value.**
			MGAMMA R3	458	**W/B adjustment, gradation 3R adjustment value.**
			MGAMMA G3	474	**W/B adjustment, gradation 3G adjustment value.**
			MGAMMA B3	524	**W/B adjustment, gradation 3R adjustment value.**
			MGAMMA WRITE		**EEP writing of adjustment values.**
			GAMMA (3/3)	W/B ADJUST Submenu	
		16/17	MGAMMA R4	607	**W/B adjustment, gradation 4R adjustment value.**
			MGAMMA G4	627	**W/B adjustment, gradation 4G adjustment value.**
			MGAMMA B4	697	**W/B adjustment, gradation 4B adjustment value.**
			MGAMMA R5	762	**W/B adjustment, gradation 5R adjustment value.**
			MGAMMA G5	770	**W/B adjustment, gradation 5G adjustment value.**
			MGAMMA B5	857	**W/B adjustment, gradation 5B adjustment value.**
			MGAMMA R6	900	**W/B adjustment, gradation 6R adjustment value.**
			MGAMMA G6	895	**W/B adjustment, gradation 6G adjustment value.**
			MGAMMA B6	1000	**W/B adjustment, gradation 6R adjustment value.**
			MGAMMA WRITE		**EEP writing of adjustment values.**
	12		SYSTEM INFORMATION	SYSTEM INFORMATION Submenu	Press “OK” to enter to SYSTEM INFORMATION Submenu (Only for Engineering purpose, don’t use)
		17/17	NOISE LEVEL	0	**Informative (changing).**
			GLOBAL MOTION	XXX	**Informative (changing).**
			BIT RATE	XXXXXXX	**Informative.**
			Scan name search	2	**Changeable between 0 and 255.**
			VPS code	FFFF	**Informative.**
			830/1 code	CA03	**Informative.**
			830/2 code	FFFF	**Informative.**
			Top TXT enabled	1	**Press “◀” or “▶” to change 0/1.**
			CEC	off	

6. Video Signal Adjustment Procedure

6.1. RGB SCART ADC

1. Enter in Service mode.
2. Press “▼” until selecting “ADC ADJUST” option.
3. Press “OK”.
4. “ADC ADJUST” menu appears.
5. Press “▼” until selecting “ADJUST” option.
6. Press “►”until selecting “Internal Signal”.
7. Press “▲”until selecting “MODE” option.
8. Press “►”until selecting “RGB”.
9. Press “▼” until selecting “AUTO ADC” option.
10. Press “►”, the adjustment starts.
11. “SUCCESS” appears when the adjustments finish.
12. Exit of Service mode.

6.2. COMPONENTS ADC

1. Enter in Service mode.
2. Press “▼” until selecting “ADC ADJUST” option.
3. Press “OK”.
4. “ADC ADJUST” menu appears.
5. Press “▼” until selecting “ADJUST” option.
6. Press “►”until selecting “Internal Signal”.
7. Press “▲”until selecting “MODE” option.
8. Press “►”until selecting “YPbPr(SD)” or “YPbPr(HD)”
9. Press “▼” until selecting “AUTO ADC” option.
10. Press “►”, the adjustment starts.
11. “SUCCESS” appears when the adjustments finish.
    Note: both SD and HD are adjusted.
12. Exit of Service mode.

7. White Balance Adjustment

Condition: AV MODE= **Dynamic** (backlight at max.).

- Adjustments reference device: **Minolta CA-210**
- Adjustments target: **x=0.272, y=0.277**

  High: adjustments spec ±0.001, inspection spec: ±0.002

  Low: adjustments spec ±0.002, inspection spec: ±0.004

1. Press “▼” until selecting “GAMMA” option.
2. Press “OK”.
3. “GAMMA” menu appears.
4. Press “▼” until selecting “MGAMMA RESET”.
5. Press “►”, to restore default values.
6. “MGAMMA RESET SUCCESS” appears.
7. Press “P+” to increase one page.
8. Press “1”, appears “Internal Adjustments Pattern 1”.
9. Hold the default value for “MGAMMA G1”.

(Note: next, try to get the (x, y) adjustments target, changing “MGAMMA R1” and “MGAMMA B1” as follow).

10. Press “▼” until selecting “MGAMMA R1”.
11. Press “◄ ►” until you obtain the desired value.
12. Press “MENU” to return to previous menu.
13. Press “▼” until selecting “MGAMMA B1”.
14. Press “◄ ►” until you obtain the desired value.
15. Press “MENU” to return to previous menu.

    (Note: In case of not being possible to achieve the desired (x, y) target, try to get it by changing also the “MGAMMA G1”)
16. Press “2”, appears “Internal Adjustments Pattern 2”.
17. Repeat from step 9 to 15 for the “MGAMMA R2” and “MGAMMA B2”.
18. Press “3”, appears “Internal Adjustments Pattern 3”.
19. Repeat from step 9 to 15 for the “MGAMMA R3” and “MGAMMA B3”.
20. Press “4”, appears “Internal Adjustments Pattern 4”.
21. Repeat from step 9 to 15 for the “MGAMMA R4” and “MGAMMA B4”.
22. Press “5”, appears “Internal Adjustments Pattern 5”.
23. Repeat from step 9 to 15 for the “MGAMMA R5” and “MGAMMA B5”.
24. Press “6”, appears “Internal Adjustments Pattern 6”.
25. Repeat from step 9 to 15 for the “MGAMMA R6” and “MGAMMA B6”.
26. Press “▼” until selecting “MGAMMA WRITE”.
27. Press “►”, to save the new values.
28. “MGAMMA WRITE SUCCESS” appears.

NOTE:

For activating the W/B flag, only is necessary to send the order MGAMMA WRITE. After this action, the “W” W/B flag will change to “1”.

8. Initialization to factory setting

Caution: When the factory settings have been made, all user setting data, including the channel settings, are initialized. (The adjustments done in the adjustment process mode are not initialized.) Keep this in mind when initializing these settings.

1. Enter in Service mode.
2. Press "▼" or "▲" key until selecting INIT.
3. Press OK key.
4. INIT menu appears and "Factory init" option is selected.
5. Press "◄" or "►" until selecting the option desired (EURO/RUSSIA/SWEDEN/UK/EAST EUROPE).
6. Press OK key and initialization starts.
7. OK, EURO message appears for EURO option when the setting is complete.
   OK, RUSSIA message appears for RUSSIA option when the setting is complete.
   OK, SWEDEN message appears for SWEDEN option when the setting is complete.
   OK, UK message appears for UK option when the setting is complete.
   OK, EAST EUROPE message appears for EAST EUROPE option when the setting is complete.

   Note: Never turn the power off during initialization.

To exit the adjustment process mode, unplug the AC power cord from the outlet to forcibly turn off the power.

The following settings will be back to their factory ones.

- User settings
- Channel data (e.g. broadcast frequencies)
- Maker option setting
- Password data

9. Lamp error detection

1. Function description

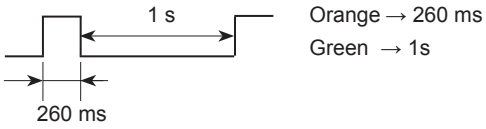
This LCD colour television has a function (lamp error detection) to be turned OFF the TV set automatically for safety criteria when the lamp or lamp circuit is abnormal.

If the lamp or lamp circuit is abnormal, or some other errors happen, and the lamp error detection is executed, the following occurs:

a. The TV set is turned OFF automatically 20 seconds after it is turned ON by the user.
(The power LED on the front side of TV turns from green to red)

b. If the situation “a.” happens 5 times sequentially, it becomes impossible to turn on the power.
(The power LED turns from green to red and keeps blinking in red).

LED Flashing timing



2. Countermeasures

a. Checking with [L Error Check Off]. Repair the problem that produces the LAMP ERROR. The TV remains with power LED blinking until K mode is forced by local keyboard, in order to disable the LAMP ERROR detection. To disable the LAMP ERROR feature is necessary enter in K mode by pressing “VOL DOWN” and “⏎” keys at same time when the AC cord is plugged in.

b. Resetting the LAMP ERROR counter. After the lamp and lamp circuit are found out of trouble, the LAMP ERROR counter should be reset. If a LAMP ERROR is detected five consecutive times, the power cannot be turned on.

Method 1: Using the cursor (UP/DOWN) key, move to the cursor to [L Error Reset] on Line 6 of ETC Menu Fig 4. With the cursor (LEFT/RIGHT) keys reset the value to “0”.

Method 2: In the case the TV is not blocked (less than 5 consecutive errors), switch on the Set. After 30 minutes working, the LAMP ERROR counter will be reset automatically.

10. Public Mode (Hotel mode)

1. How to Enter in the Public Mode (Hotel Mode).

There are three following ways to display the Public Mode setting screen.

Method 1:

Turn on the power and enter in the Service mode as usual and select line 8 [PUBLIC MODE].

Method 2:

Unplug the AC power cord.
While pressing "VOL+" and "⏎" keys at the same time, plug the AC power cord.
Then, when you are asked for the password, enter "0027".
After this sequence the TV will turn on showing the Public Mode setting screen as it is shown in Fig. 5.
In another case, the screen is erased, and it operates in the ordinary mode.

Method 3:

By special R/C code: RC table LCD, SYS CORD: 0x78, RC DATA: (HEX) 0xC7, (DEC) 199.
Then, when you are asked for the password, enter "0027".
After this sequence the TV will turn on showing the Public Mode setting screen as it is shown in Fig. 5.

Is possible to select each item of function by pressing cursor UP/DOWN keys on the remote control or CH (UP/DOWN) keys on the LCD TV.

The setting position of each item of functions is made by pressing cursor RIGHT/LEFT keys on the remote control or VOL (+) / (-) keys on the LCD TV.

Set to ON the HOTEL MODE function to active it.

Select EXECUTE position after you set all function, and press cursor RIGHT/LEFT keys on the remote control or VOL (+) / (-) keys on the LCD TV for confirmation.

Unplug and plug the AC power cord to take effect all the changes.

2. Public Mode Settings.

1. POWER ON FIXED [VARIABLE FIXED]
   When it is set to "FIXED" the TV is impossible to be switch off by Main Switch or Remote Control.

2. MAXIMUM VOLUME [0 60]
   Is possible to set the maximum volume at limited level.

3. VOLUME FIXED [VARIABLE FIXED]
   Is possible to fix the sound volume at limited level.
   When "FIXED" is selected the sound volume before limited is fixed.

4. VOLUME FIXED LEVEL [0 60]
If "FIXED" has been selected, is possible to set a fixed volume at the level that is chosen.

5. RC BUTTON [RESPOND NO RESPOND]
   If "NO RESPOND" is selected, the remote control keys are inoperative.

6. PANEL BUTTON [RESPOND NO RESPOND]
   If "NO RESPOND" has been selected, the set's keys remain deactivated (Except POWER key).

7. MENU BUTTON [RESPOND NO RESPOND]
   If "NO RESPOND" has been selected, "MENU" key, of remote control, is inoperative.

10. Public Mode (Hotel mode) (continued)

8. ON SCREEN DISPLAY [On Off]
   If “NO” has been selected, the On Screen Display does not appear.

9. INPUT MODE START [NORMAL → TV → SCART1 → SCART2 → COMPONENTS → HDMI1 → HDMI2 → AV →MEDIA PLAYER]
   When any other item than “NORMAL” has been selected, the sets will start in a selected input mode at the next power-on.

10. INPUT MODE FIXED [VARIABLE → FIXED]
    “FIXED” has been selected, any channels and input modes other than those selected at the start mode cannot be picked up.

11. RC PATH THROUGH [ON OFF] T.B.D.

12. HOTEL MODE [ON OFF] If ON has been selected the HOTEL MODE is activated.

13. RESET Cancel all Public Mode settings. (It returns to the factory settings)

14. EXECUTE Select this item, and press cursor RIGHT / LEFT keys on the remote control or VOL (+) / (-) keys on the LCD TV for confirmation the functions settings.

11. SMART LOADER

Description.

The Smartloader is a function implemented in the service software of SEES designed DH500 model intended to easily replicate the user settings of one TV into another. These settings include (but not restricted to): picture and audio, tuning set-up, language and country selection, PIN, child locked programs… Factory adjustments are not copied as they are different for every TV.
The Smartloader makes possible the user data to be stored in a memory device connected to the USB terminal of the TV that is used as reference and later load those data into other TVs by using their respective USB terminal.

How it works.

In reference TV:

1. Insert a memory device in the USB slot.
2. Enter in service mode, select Factory Menu and SMARTLOADER option.
3. Select “Save settings to USB” and press the RIGHT cursor in the remote control.
4. Wait until “OK” is displayed, the file has been successfully created in the root directory of the memory device. In case of error, an explanation message is shown.

In TV to be cloned:

1. Insert a memory device with a file in it obtained following the above procedure.
2. Enter in service mode, select Factory Menu and SMARTLOADER option.
3. Select “Load settings from USB” and press the RIGHT button in the remote control.
4. After some seconds, “OK, reboot TV set” is displayed. In case of error, an explanation message is shown.
5. As indicated, reboot the TV to load the new settings.

Very important: All the TVs must have the same software version and hardware.

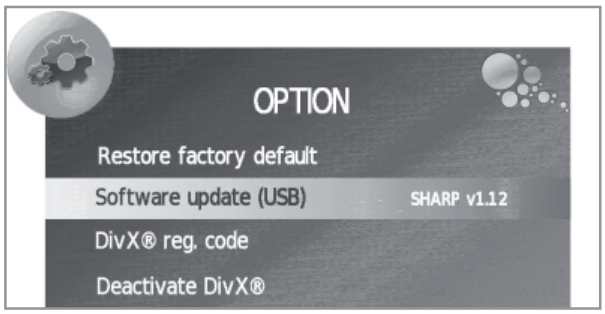
SOFTWARE UPDATING

1. Introduction

1. In order to proceed with the Software Updating do not enter into Service Mode.
2. The TV should be in normal operation (ON).

2. Procedure

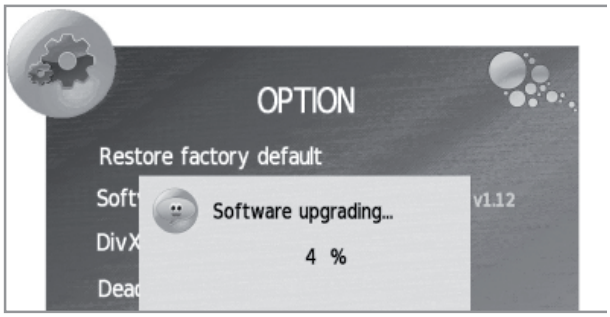
1. Insert the USB memory into the USB terminal with the file name "**MERGE.bin**" on the root directory.
2. Press "MENU".
   - "PICTURE" menu appears on screen.
3. Press "►" until selecting "OPTION" menu.



4. Press "▼" until selecting "Software update (USB) Sharp v*.*".
   - The current software version is displayed.

5. Press "OK"
   - "**Are you sure? Yes - No**" message is displayed.

6. Press "◄" until selecting "Yes".
7. Press "**OK**".
   - The software update process starts.



   - "Software upgrading… **%" message appears.
   - The upgrading process is finished, the LCD-TV restarts.

8. Remove the AC cord and plug it again.
9. Return to OPTION menu to check that the version has been updated successfully.

NOTE:

If the TV is switched off during the upgrade process, when it gets to switched on again, the Power LED flashes: Orange for 130 ms and green for 1.5 s, with black screen until it is detected in the USB connector a file "marge. bin." Then the power LED will flash:

Orange for 40 ms and green for other 40 ms, with black screen while the new software is uploaded.

Once the process is completed, the TV set will start automatically.

MAJOR ICs INFORMATION

1. General ICs Information

- **IC201:** Digital DVBT / VIF Demodulator
  Part number: MSB1220LQFP
  Sharp code: RH-IXC868WJZZY

The MSB1220L is a multistandard analog TV receiver and DVB-T demodulator. It is fully compliant with the DVB-T specification and Nor Dig unified specification. Converts IF differential signals to MPEG-2 transport stream format. It can be used in all 2k, 4k and 8 k modes. The device includes a high performance 11 bit A/D converter capable of accepting direct IF at 36 or 44 Mhz. A digital filter with high rejection capability is also cope with digital or analog adjacent channel. The frecuency capture range is sufficient to compensate for the combined offset introduced by the tuner and broadcaster without re-programming the tuner.
It contains a signal processor to offer high quality reception of analog terrestrial multistandard signal.

- **IC 306:** Audio power IC
  Part number: MSH 9000-LF
  Sharp code : RH-IXC867WJQZY

10W-Ch audio power class-D operation for driving bridged-tied stereo speakers.

- **IC 309:** Headphones amplifier.
  Part number: BH3544F
  Sharp code: VHIBH3544F+-1Y

The BH3544F is a 6 dB gain headphones amplifier. It built-in mute function for preventing pop noise when power supply turns On or Off.
Moreover , built-in thermal shutdown circuit to prevent short circuit .

- **IC 1007 :** 64M-Bit Serial Flash
  Part number: MX25L6445EMI-10G-TR
  Sharp code: RH-IXD012WJZZY

The MX25L6445EMI ia a 64 M-Bit serial flash, 3,3 V single operation. The flash memory stores the main software that is used for the main CPU (IC 1001).

- **IC 1001:** All – in – one DTV Processor
  Part number: MSD3303GX
  Sharp code : RH-IXC869WJQZY

The MSD3303GX is a system one chip for flat panel integrated digital television. It integrating MPEG2 and h.264 high definition video decoders into a single device. By including a flexible AV decoder capable of decoding a plethora of high definition, USB connectivity and a powerful CPU.

- **IC 1002 & IC 1003 :** 512 Mb DDR2 SDRAM
  Part number: MK4T51163QG
  Sharp code: RH-IXC505WJQZQ

The 512Mb DDR2 SDRAM is organized as 16Mbit x 8 I/Os x 4 banks device. This synchronous device achieves high speed double-data-rate transfer rates of up to 800Mb/sec/pin (DDR2-800) for general applications.
All of the control and address inputs are synchronized with a pair of externally supplied differential clocks (CK rising and CK falling).
This device operates with single 1,8V power supply .

- **IC 1901 & IC 1902 :** NVM of HDMI inputs (EDID)
  Part number: M24C02W81EY
  Sharp code: VHIM24C02W61EY

The M24C02W81EY is a 2-wire (I2C bus type) serial EEPROM that is electrically programmable. This NVM memory is associated to the MAIN MICRO. This EEPROM chip stores the data structure used to carry configuration information for optimal use of a display (EDID data) when use a HDMI signal input.

- **IC 1006 :** NVM of settings and HDCP data
  Part number: IC M24C64
  Sharp code: VHIM24C64WN-1Y

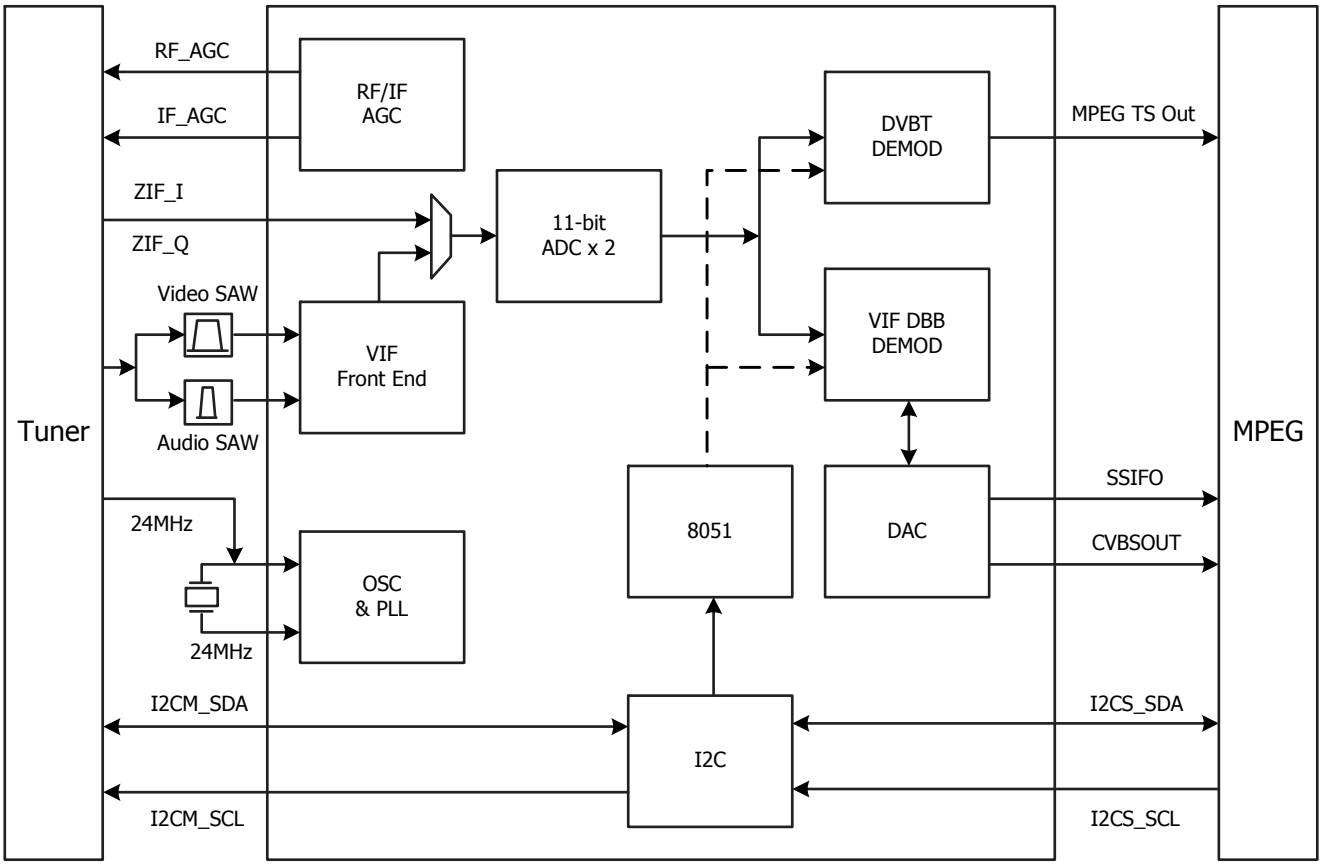
- **IC 8101 :** Power supply USB port protection
  Part number: TPS2553DBVT-1
  Sharp code: RH-IXC975WJZZY

Soft start function witch are required for the power supply port protection. 1000 mA continuous current load.

2. Detailed ICs Information, DUNTKF261WE (Main Unit)

2.1. IC201 (MSB1220LQFP)

2.1.1. Block Diagram



2.1.2. Pin Description

Power Pins

Pin Name	Pin Type	Function	Pin
AVDD_33	3.3V Power	Analog Power	2, 7, 14, 18, 26
VDDC	1.2V Power	Digital Core Power	32, 47
GND	Ground	Ground	1, 5, 13, 15, 23, 28, 33

Misc. Interface

Pin Name	Pin Type	Function	Pin
EXTRSTN	Input w/ 5V-Tolerant	Chip Reset; Low Reset	29
IF_AGC	Output	IF AGC	27
RF_AGC	Output	RF AGC	48

2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.1. IC201 (MSB1220LQFP)

2.1.2. Pin Description (continued)

Analog Interface

Pin Name	Pin Type	Function	Pin
SSIFO	Analog output	SSIF Output	3
CVBSOUT	Analog output	CVBS Output	4
CLKO	Analog output	Clock Output	6
VR27	Analog output		8
SIFIP	Analog input	SIF Positive Input	9
SIFIM	Analog input	SIF Negative Input	10
VIFIM	Analog input	VIF Positive Input	11
VIFIP	Analog input	VIF Negative Input	12
VREFM	Analog input	Analog Reference Pin	16
VREFP	Analog input	Analog Reference Pin	17
ZIF_QM	Analog input	ADC ZIF Q Negative Input	19
ZIF_QP	Analog input	ADC ZIF Q Positive Input	20
ZIF_IM	Analog input	ADC ZIF I Negative Input	21
ZIF_IP	Analog input	ADC ZIF I Positive Input	22
XIN		Crystal Oscillator Input	24
XOUT		Crystal Oscillator Output	25

Transport Stream Interface

Pin Name	Pin Type	Function	Pin
TS_DATA[7:0]	Output	Transport Stream Data Bus Bit [7:0]	39-46
TS_VALID	Output	Transport Stream Data Valid	38
TS_SYNC	Output	Transport Stream Packet Start	37
TS_CLK	Output	Transport Stream Clock Out	36

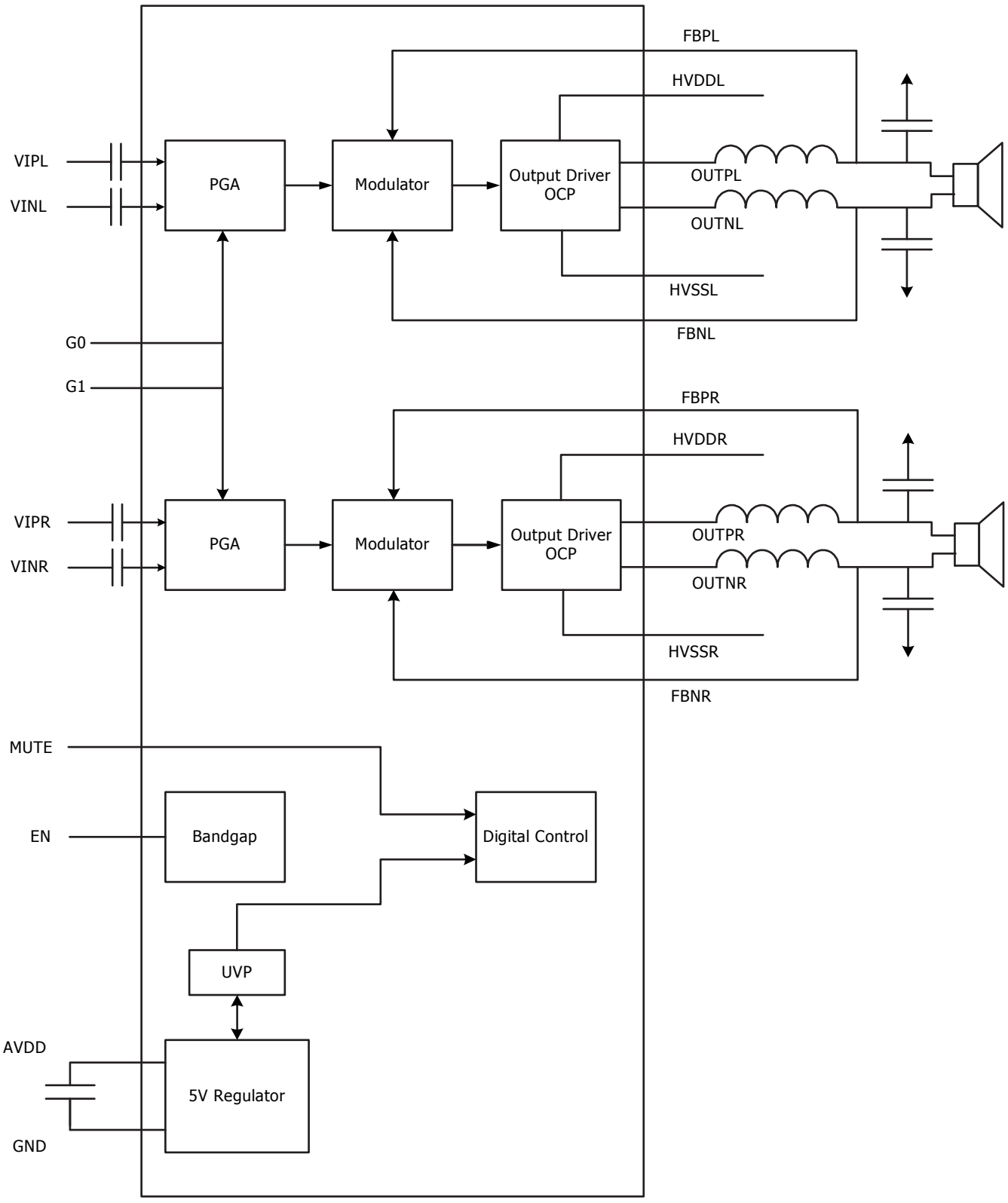
Serial Interface

Pin Name	Pin Type	Function	Pin
I2CS_SCL	Input w/ 5V-Tolerant	Serial Clock	34
I2CS_SDA	I/O w/ 5V-Tolerant	Serial Data	35
I2CM_SCL	I/O w/ 5V-Tolerant	Serial Clock Tuner	30
I2CM_SDA	I/O w/ 5V-Tolerant	Serial Data Tuner	31

2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.2. IC 306 (MSH 9000-LF)

2.2.1. Functional Block Diagram



2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.2. IC 306 (MSH 9000-LF)

2.2.2. Pin Description

Analog Interface

Pin Name	Pin Type	Function	Pin
VIPL	Analog Input	Left channel P side audio input	3
VINL	Analog Input	Left channel N side audio input	4
VINR	Analog Input	Right channel N side audio input	7
VIPR	Analog Input	Right channel P side audio input	8
OUTNR	Analog Output	Right channel N side switching output	12, 14
OUTPR	Analog Output	Right channel P side switching output	17, 19
FBPR	Analog Output	Right channel P side feedback	22
FBNR	Analog Output	Right channel N side feedback	23
FBNL	Analog Output	Left channel N side feedback	28
FBPL	Analog Output	Left channel P side feedback	29
OUTPL	Analog Output	Left channel P side switching output	32, 34
OUTNL	Analog Output	Left channel N side switching output	37, 39

Digital Interface

Pin Name	Pin Type	Function	Pin
G0	Digital Input	Volume gain control bit 0	5
G1	Digital Input	Volume gain control bit 1	2
MUTE	Digital Input	Class-D is mute when EN=Hi	6
EN	Digital Input	Class-D is enable when EN=Hi	26

Power Pins

Pin Name	Pin Type	Function	Pin
HVSSL	Ground	Ground for left channel	1, 30, 31, 40
HVSSR	Ground	Ground for right channel	10, 11, 20, 21
HVDDR	Analog Input	Supply voltage for Right channel	13, 15, 16, 18
HVDDL	Analog Input	Supply voltage for Left channel	33, 35, 36, 38
AVDD	Analog Input	Internal reference voltage	25
GND	Ground	Ground	9, 24

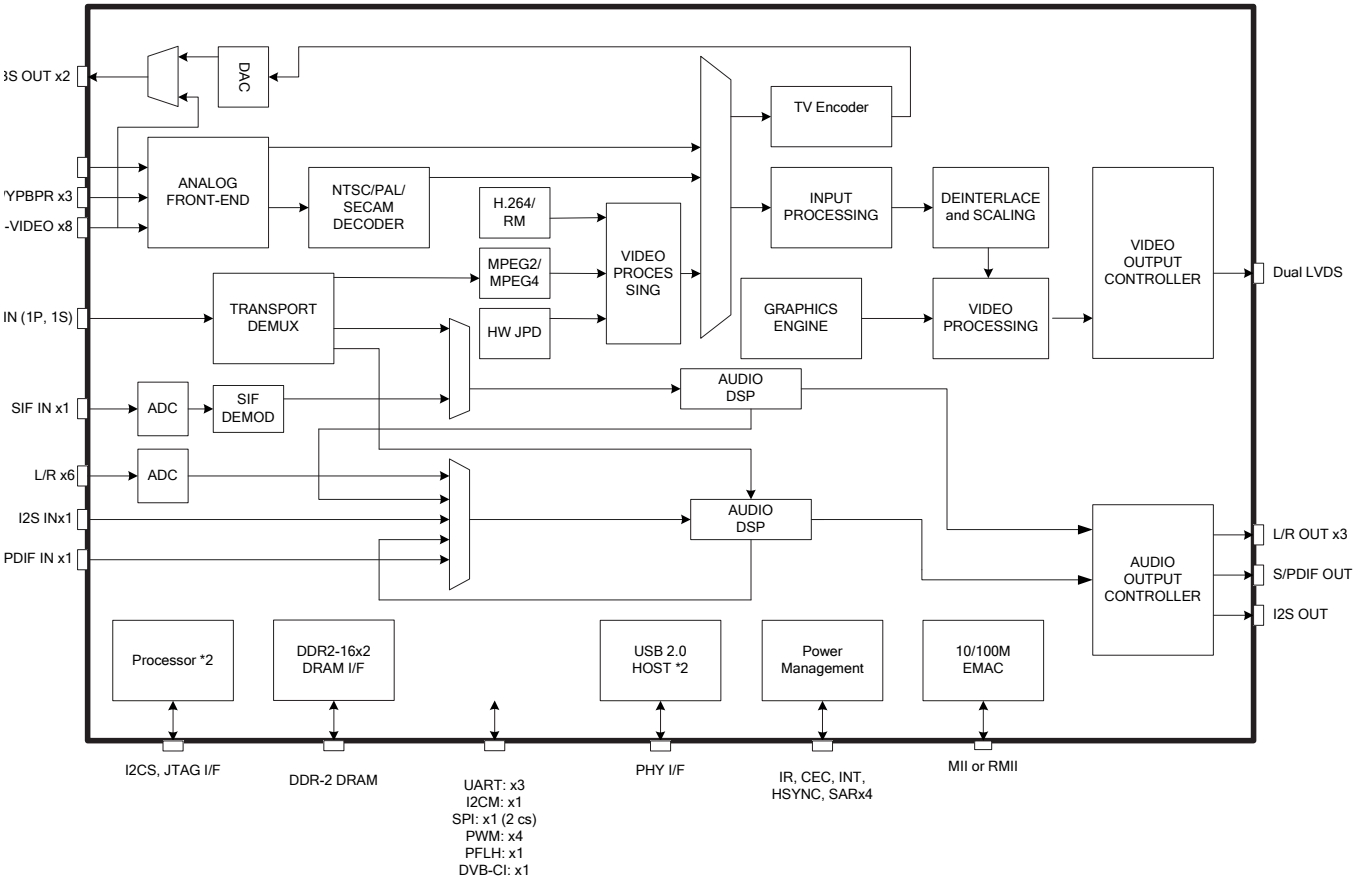
2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.3. IC 1001 (MSD3303GX)

2.3.1. Key Features

- Master CPU with MMU.
- DRAM controller supporting up to two 16-bit DDR2 interface.
- Power control module with ultra low power MCU available in stand by mode.
- Parallel interface for external parallel NOR flash and NAND flash support.
- H.264 decoder. Support resolution up to HDTV (1080i, 720p) .
- MPEG-2 decoder.
- Video analog processor.
- NTSC/PAL/SECAM Video Decoder.
- Support Teletext mode.
- Two CVBS video outputs.
- Eight configurable CVBS, Y/C, S-video inputs.
- Multistandard sound Processor.
- AC3 decoder.
- I²S digital audio output.
- Six L/R audio line-inputs.
- SIF audio output.
- Stereo L/R output for main speaker.
- Two HDMI / HDCP compliant input port.
- CEC support.
- Fully programmable scaler and display processing.
- Support up to 10 bit LVDS full HDTV panel interface.
- Support USB 2.0
- Support Common Interface for conditional access.

2.3.2. Block Diagram



2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.3. IC 1001 (MSD3303GX)

2.3.3. Pin Description

Analog Interface

Pin Name	Pin Type	Function	Pin
VCLAMP		CVBS/YC Mode Clamp Voltage Bypass	K4
REFP		Internal ADC Top De-coupling Pin	H4
REFM		Internal ADC Bottom De-coupling Pin	J4
REXT	Analog Input	External Resister 390 ohm to AVDD_33	G4
HSYNC0	Schmitt Trigger Input w/ 5V-tolerant	HSYNC / Composite Sync for VGA Input from channel 0	N2
VSYNC0	Schmitt Trigger Input w/ 5V-tolerant	VSYNC for VGA Input from channel 0	N1
HSYNC1	Schmitt Trigger Input w/ 5V-tolerant	HSYNC / Composite Sync for VGA Input from channel 1	K3
VSYNC1	Schmitt Trigger Input w/ 5V-tolerant	VSYNC for VGA Input from channel 1	K2
HSYNC2	Schmitt Trigger Input w/ 5V-tolerant	HSYNC for VGA Input from channel 2	J5
BINM	Analog Input	Reference Ground for Analog Blue Input	T3
BIN0P	Analog Input	Analog Blue Input from Channel 0	R1
BIN1P	Analog Input	Analog Blue Input from Channel 1	K1
BIN2P	Analog Input	Analog Blue Input from Channel 2	U1
GINM	Analog Input	Reference Ground for Analog Green Input	R2
GIN0P	Analog Input	Analog Green Input from Channel 0	R3
GIN1P	Analog Input	Analog Green Input from Channel 1	L3
GIN2P	Analog Input	Analog Green Input from Channel 2	V2
SOGIN0	Analog Input	Sync On Green Input from Channel 0	P3
SOGIN1	Analog Input	Sync On Green Input from Channel 1	L2
SOGIN2	Analog Input	Sync On Green Input from Channel 2	V3
RINM	Analog Input	Reference Ground for Analog Red Input	P1
RIN0P	Analog Input	Analog Red Input from Channel 0	P2
RIN1P	Analog Input	Analog Red Input from Channel 0	L1
RIN2P	Analog Input	Analog Red Input from Channel 0	V1

Analog Video Input/Output Interface

Pin Name	Pin Type	Function	Pin
CVBS7	Analog Input	CVBS (Composite) Video Input Channel 7	M3
CVBS6	Analog Input	CVBS (Composite) Video Input Channel 6	M2
CVBS5	Analog Input	CVBS (Composite) Video Input Channel 5	N3
CVBS4	Analog Input	CVBS (Composite) Video Input Channel 4	M1
CVBS3	Analog Input	CVBS (Composite) Video Input Channel 3	T1
CVBS2	Analog Input	CVBS (Composite) Video Input Channel 2	U2
CVBS1	Analog Input	CVBS (Composite) Video Input Channel 1	U3
CVBS0	Analog Input	CVBS (Composite) Video Input Channel 0	W1
VCOM1	Analog Input	CVBS Input Reference Ground	T2
VCOM0	Analog Input	CVBS Input Reference Ground	Y3
CVBSOUT0	Analog Output	CVBS (Composite) Video Output Channel 0	Y2
CVBSOUT1	Analog Output	CVBS (Composite) Video Output Channel 1	AA2

2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.3. IC 1001 (MSD3303GX)

2.3.3. Pin Description (continued)

Analog Audio Input/Output Interface

Pin Name	Pin Type	Function	Pin
SIF0P	Analog Input	SIF Audio Input Channel 0	W3
SIF0M	Analog Input	Reference Ground for SIF Audio Input Channel 0	W2
I2S_OUT_MCK	Output	Audio Master Clock Output	A8
I2S_OUT_WS	Output	Word Select Output; 4mA driving strength	B7
I2S_OUT_BCK	Output	Audio Bit Clock Output	C7
I2S_OUT_SD	Output	Audio Serial Data Output; 4mA driving strength	D8
GPIO102/ I2S_OUT_SD2	Output	General Purpose Input/Output; 4mA driving strength / Audio Serial Data Output; 4mA driving strength	C5
GPIO103/ I2S_OUT_SD3	Output	General Purpose Input/Output; 4mA driving strength / Audio Serial Data Output; 4mA driving strength	D5
I2S_OUT_MUTE GPIO90/ I2S_OUT_MUTE	Output	Audio Output Mute Control General Purpose Input/Output; 4mA driving strength / Audio Output Mute Control	E7 D7
SPDIFO	Output	S/PDIF Audio Output; 4mA driving strength	E9
I2S_IN_WS/ GPIO67	I/O	Word Select Input / General Purpose Input/Output; 4mA driving strength	A7
I2S_IN_BCK/ GPIO68	I/O	Audio Bit Clock Input / General Purpose Input/Output; 4mA driving strength	B8
I2S_IN_SD	Input	Audio Serial Data Input	C8
SPDIFI	Input w/ 5V-tolerant	S/PDIF Audio Input	F11
AUL0	Analog Input	Audio Line Input Left Channel 0	Y1
AUR0	Analog Input	Audio Line Input Right Channel 0	AA3
AUL1	Analog Input	Audio Line Input Left Channel 1	AC4
AUR1	Analog Input	Audio Line Input Right Channel 1	AE1
AUL2	Analog Input	Audio Line Input Left Channel 2	AE2
AUR2	Analog Input	Audio Line Input Right Channel 2	AE3
AUL3	Analog Input	Audio Line Input Left Channel 3	AB1
AUR3	Analog Input	Audio Line Input Right Channel 3	AA1
AUL4	Analog Input	Audio Line Input Left Channel 4	AC2
AUR4	Analog Input	Audio Line Input Right Channel 4	AB2
AUL5	Analog Input	Audio Line Input Left Channel 5	AC3
AUR5	Analog Input	Audio Line Input Right Channel 5	AB3
AUCOM	Analog Input	Reference Ground for Audio Line Input	AB5
AUVRM	Analog Output	Negative Reference Voltage for Audio ADC	AD5
AUVRP	Analog Output	Positive Reference Voltage for Audio ADC	AE5
AUVAG	Analog Output	Reference Voltage for Audio Common Mode	AC5
AUOUTL2	Analog Output	Main Audio Output Left Channel 2	AD2
AUOUTR2	Analog Output	Main Audio Output Right Channel 2	AC1
AUOUTL1	Analog Output	Main Audio Output Left Channel 1	AD1
AUOUTR1	Analog Output	Main Audio Output Right Channel 1	AD3
AUOUTL0	Analog Output	Main Audio Output Left Channel 0	AD4
AUOUTR0	Analog Output	Main Audio Output Right Channel 0	AE4

2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.3. IC 1001 (MSD3303GX)

2.3.3. Pin Description (continued)

Common Interface

Pin Name	Pin Type	Function	Pin
PCMDATA[7:0]/ CI_DATA[7:0]	I/O	PCMCIA Data[7:0] / Common Interface Data[7:0]	AE14, AD14, AC14, AB14, AA14, AB20, AC20, AD20
PCMADR[14:0]/ CI_A[14:0]	Output	PCMCIA Address[14:0] / Common Interface Address[14:0]	AB11, AE12, AD12, AC12, AB12, AA12, AE13, AD13, AC13, AB13, AA13, AE19, AD19, AC19, AB19
PCMIOR/ CI_RD	Output	PCMCIA Input/Output Read / Common Interface Read	AA8
PCMIOW/ CI_WR	Output	PCMCIA Input/Output Write / Common Interface Write	AB8
PCMOEN	Output	PCMCIA Output Enable	AC6
PCMWEN	Output	PCMCIA Write Enable	AC11
PCMREG/ CI_CLK	Output	PCMCIA Register / Common Interface Clock	AE20
PCMCEN/ CI_CS	Output	PCMCIA Card Enable / Common Interface Chip Select	AA10
PCMIRQ/ CI_INT	Input	PCMCIA Interrupt Request / Common Interface Interrupt	AB7
PCMWAIT/ CI_WACK	Input	PCMCIA Extend Bus Wait Cycle / Common Interface Wait Acknowledge	AB10
CI_RST	Output	Common Interface Reset	AC18
CI_CD	Input	Common Interface Card Detect	AA20

TS Input Interface

Pin Name	Pin Type	Function	Pin
TS0CLK	Input w/ 5V-tolerant	TS Clock	AA5
TS0DATA[7:0]	Input w/ 5V-tolerant	TS Data in Parallel; LSB (bit 0) is for serial TS data	AB4, AA4, Y4, W4, V4, U4, T4, R4
TS0VALID	Input w/ 5V-tolerant	TS Data Valid	W5
TS0SYNC	Input w/ 5V-tolerant	TS Sync-Byte Indicator	Y5
TS1CLK	Input w/ 5V-tolerant	2nd TS Clock	U22
TS1DATA	Input w/ 5V-tolerant	2nd TS Data in Parallel	V22
TS1VALID	Input w/ 5V-tolerant	2nd TS Data Valid	Y22
TS1SYNC	Input w/ 5V-tolerant	2nd TS Sync-Byte Indicator	W22

2. Detailed ICs Information, DUNTKF261WE (Main Unit) (continued)

2.3. IC 1001 (MSD3303GX)

2.3.3. Pin Description (continued)

DVI/HDMI Interface

Pin Name	Pin Type	Function	Pin
RXACKN	DVI/HDMI Input	Negative DVI/HDMI Input for A Link Clock Channel	F2
RXACKP	DVI/HDMI Input	Positive DVI/HDMI Input for A Link Clock Channel	F1
RXA0N	DVI/HDMI Input	Negative DVI/HDMI Input for A Link Data Channel 0	G3
RXA0P	DVI/HDMI Input	Positive DVI/HDMI Input for A Link Data Channel 0	G2
RXA1N	DVI/HDMI Input	Negative DVI/HDMI Input for A Link Data Channel 1	G1
RXA1P	DVI/HDMI Input	Positive DVI/HDMI Input for A Link Data Channel 1	H3
RXA2N	DVI/HDMI Input	Negative DVI/HDMI Input for A Link Data Channel 2	H2
RXA2P	DVI/HDMI Input	Positive DVI/HDMI Input for A Link Data Channel 2	H1
RXBCKN	DVI/HDMI Input	Negative DVI/HDMI Input for B Link Clock Channel	B1
RXBCKP	DVI/HDMI Input	Positive DVI/HDMI Input for B Link Clock Channel	C3
RXB0N	DVI/HDMI Input	Negative DVI/HDMI Input for B Link Data Channel 0	C2
RXB0P	DVI/HDMI Input	Positive DVI/HDMI Input for B Link Data Channel 0	C1
RXB1N	DVI/HDMI Input	Negative DVI/HDMI Input for B Link Data Channel 1	D3
RXB1P	DVI/HDMI Input	Positive DVI/HDMI Input for B Link Data Channel 1	D2
RXB2N	DVI/HDMI Input	Negative DVI/HDMI Input for B Link Data Channel 2	D1
RXB2P	DVI/HDMI Input	Positive DVI/HDMI Input for B Link Data Channel 2	E3
RXCCKN	DVI/HDMI Input	Negative DVI/HDMI Input for C Link Clock Channel	AC8
RXCCKP	DVI/HDMI Input	Positive DVI/HDMI Input for C Link Clock Channel	AD8
RXC0N	DVI/HDMI Input	Negative DVI/HDMI Input for C Link Data Channel 0	AE8
RXC0P	DVI/HDMI Input	Positive DVI/HDMI Input for C Link Data Channel 0	AC9
RXC1N	DVI/HDMI Input	Negative DVI/HDMI Input for C Link Data Channel 1	AD9
RXC1P	DVI/HDMI Input	Positive DVI/HDMI Input for C Link Data Channel 1	AE9
RXC2N	DVI/HDMI Input	Negative DVI/HDMI Input for C Link Data Channel 2	AD10
RXC2P	DVI/HDMI Input	Positive DVI/HDMI Input for C Link Data Channel 2	AE10

SOURCE OF DOCUMENTATION

IC201 (MSB1210)

MSTAR Semiconductor: Preliminary Data Sheet. Version 0.2.
Digital DVBT / VIF Demodulator.
Doc. No.: MSB1210_ds_v02. August 2009.

IC 306 (MSH 9000-LF)

MSTAR Semiconductor; Preliminary Product Brief Version 0.3.
Power Management IC.
Doc. No.: MSH9000_pb_v03. April 2009.

IC1001 (MSD3303GX)

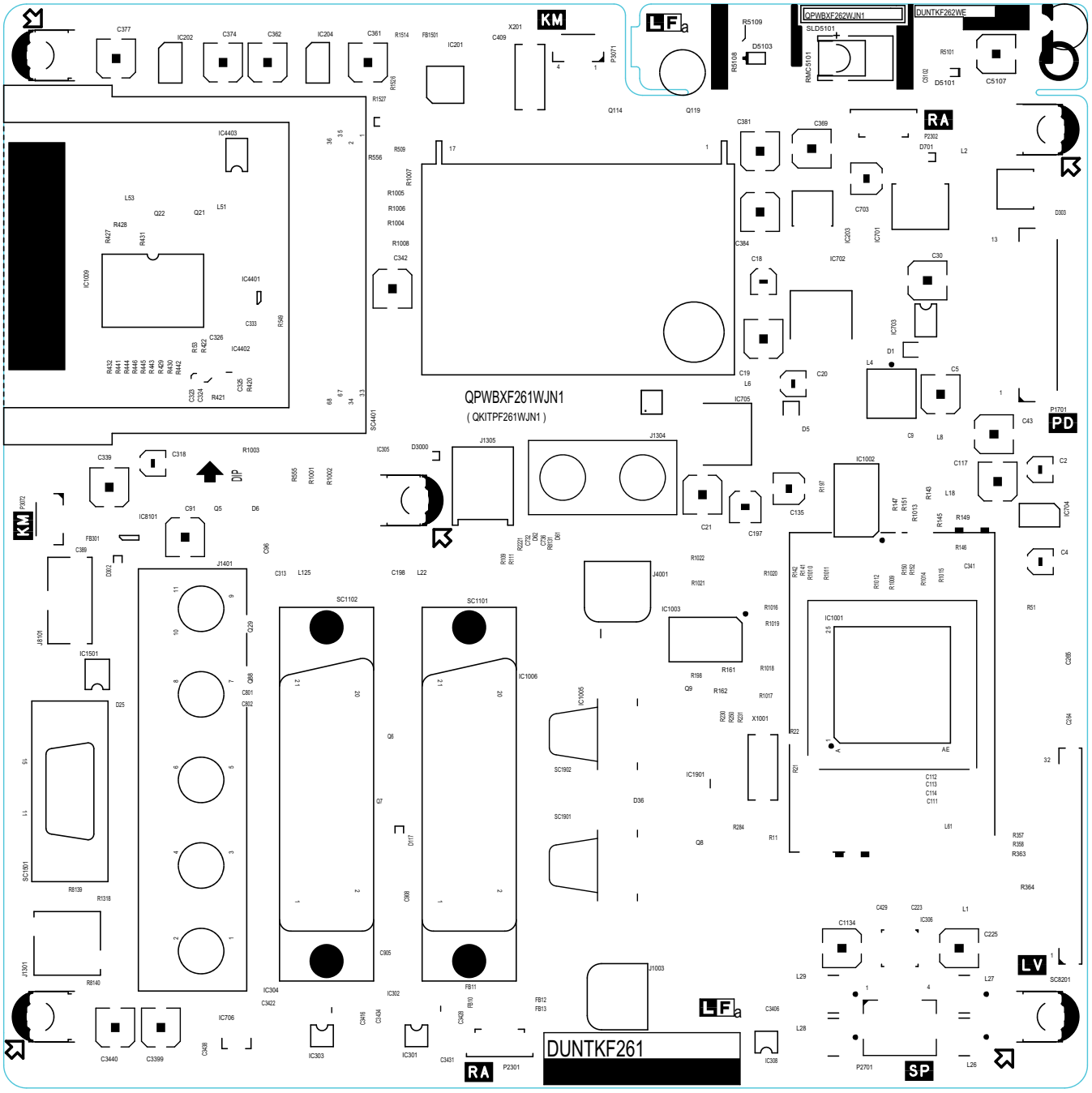
MSTAR Semiconductor; Preliminary Pin Diagram and Description. Version 0.2.
DVB LCD/PDP DTV Processor.
Doc. No.: MSD3303GX_pin_v02 . April 2009.

MSTAR Semiconductor; Block Diagram. Version 0.1.
All-in-one DTV Processor.
Doc. No.: MSD3303GX_bd_v01. April 2009.

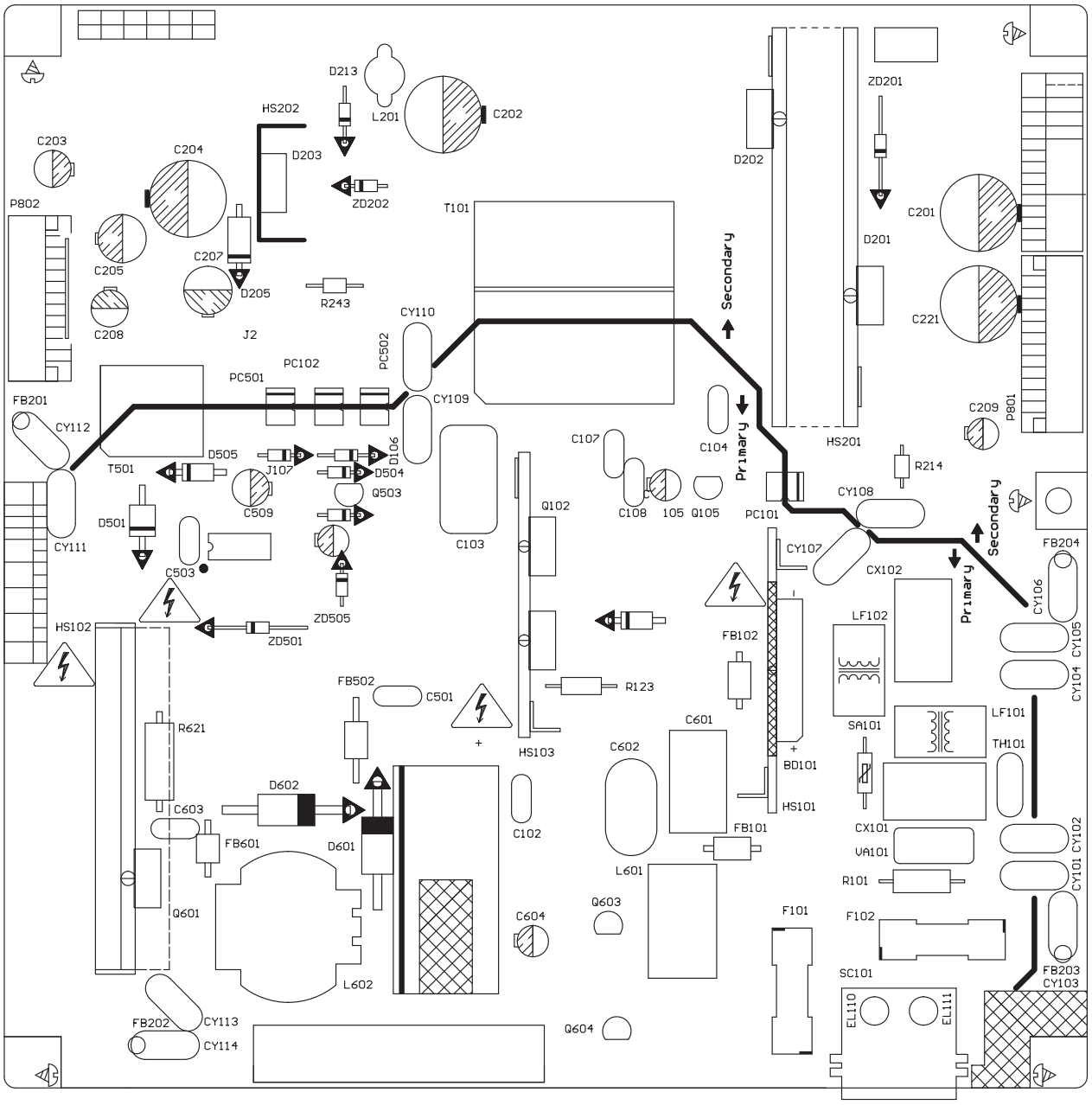
CHASSIS LAYOUT

Main Unit Layout QPWBXF261WJN1

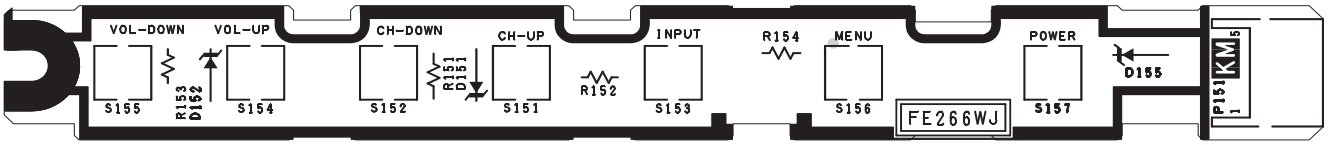
LED Unit PWB (QPWBXF262WJN1)



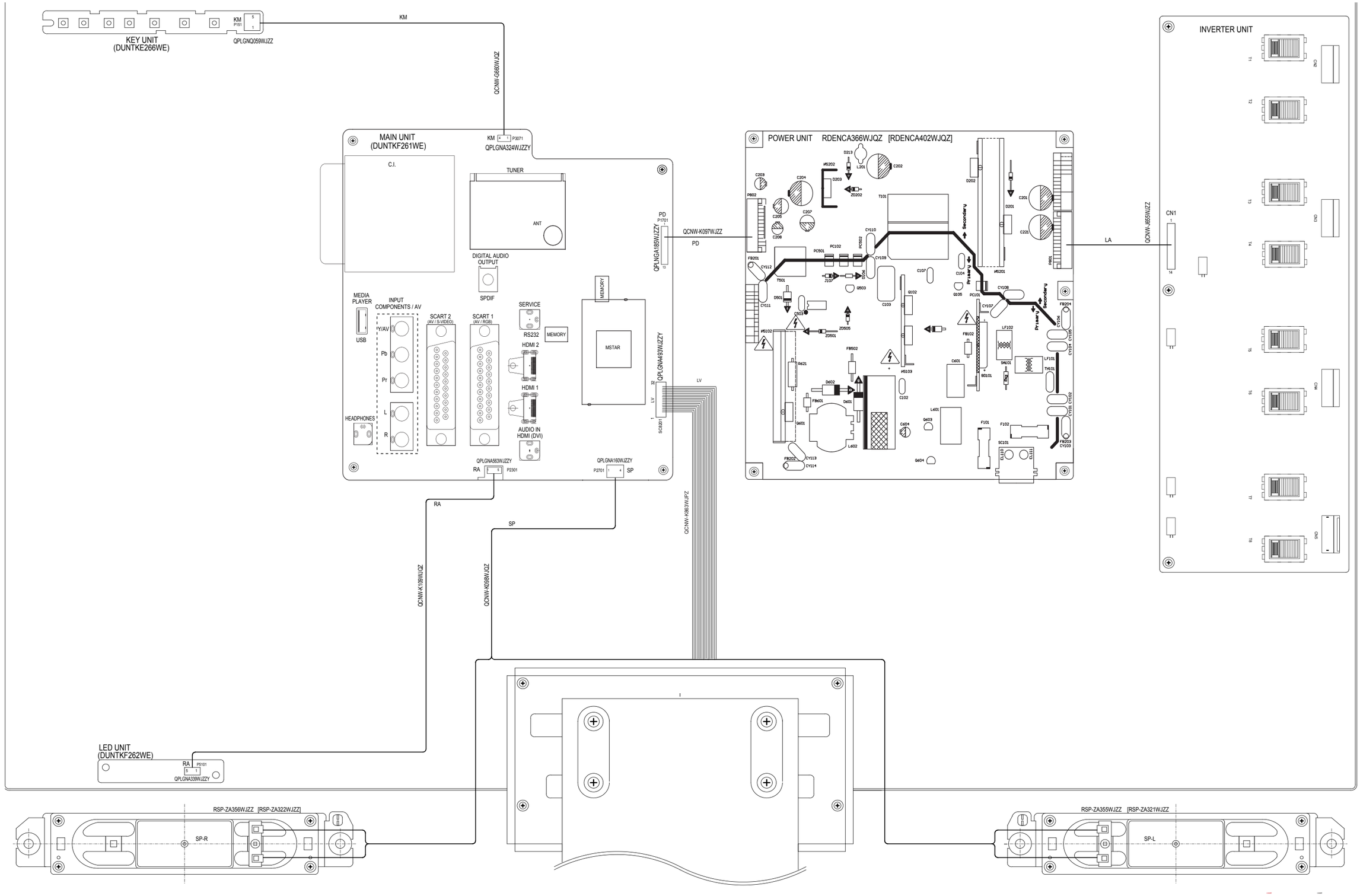
Power Unit Layout RDENCA366WJQZ



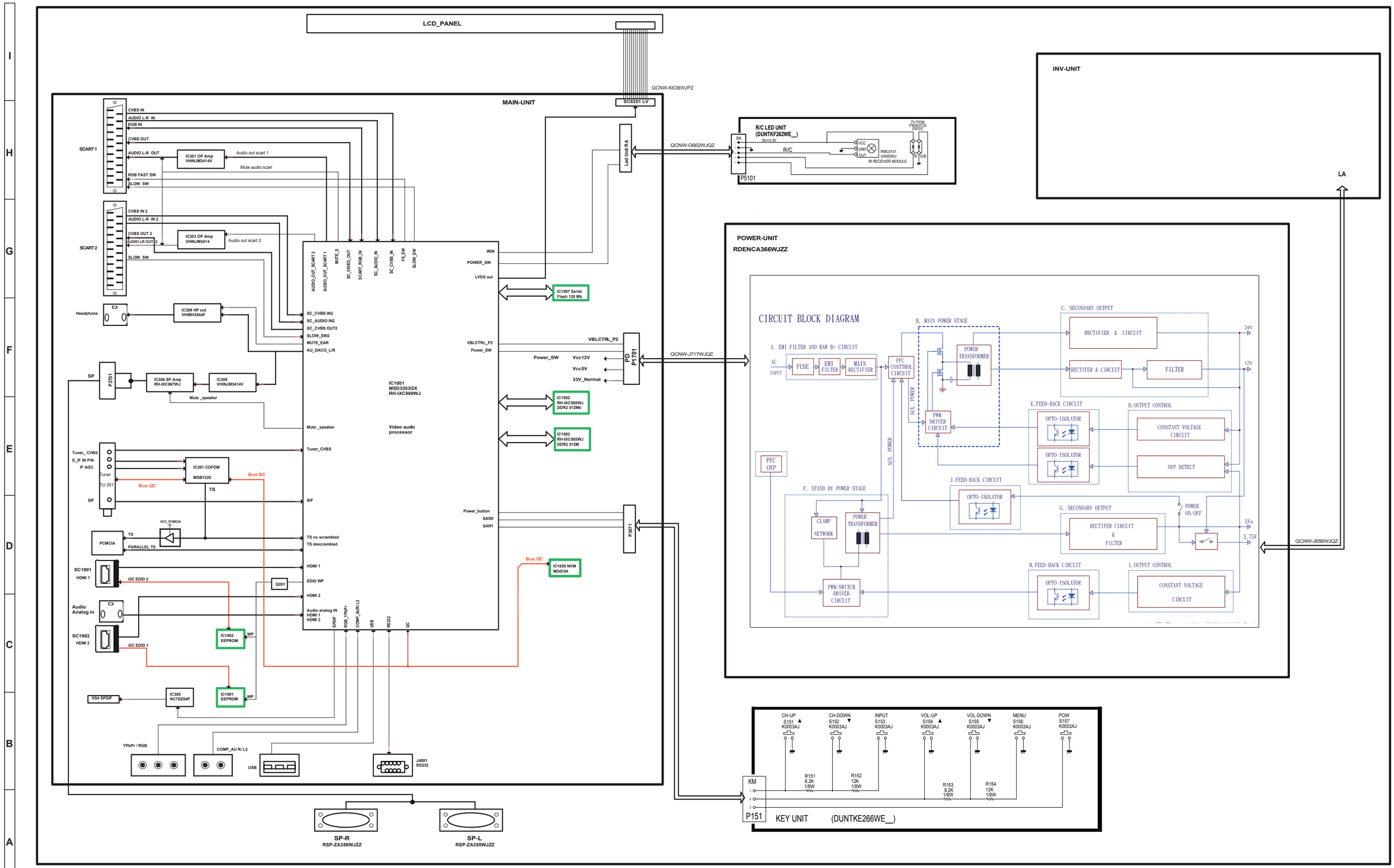
KEY Unit Layout QPWBXF266WJ



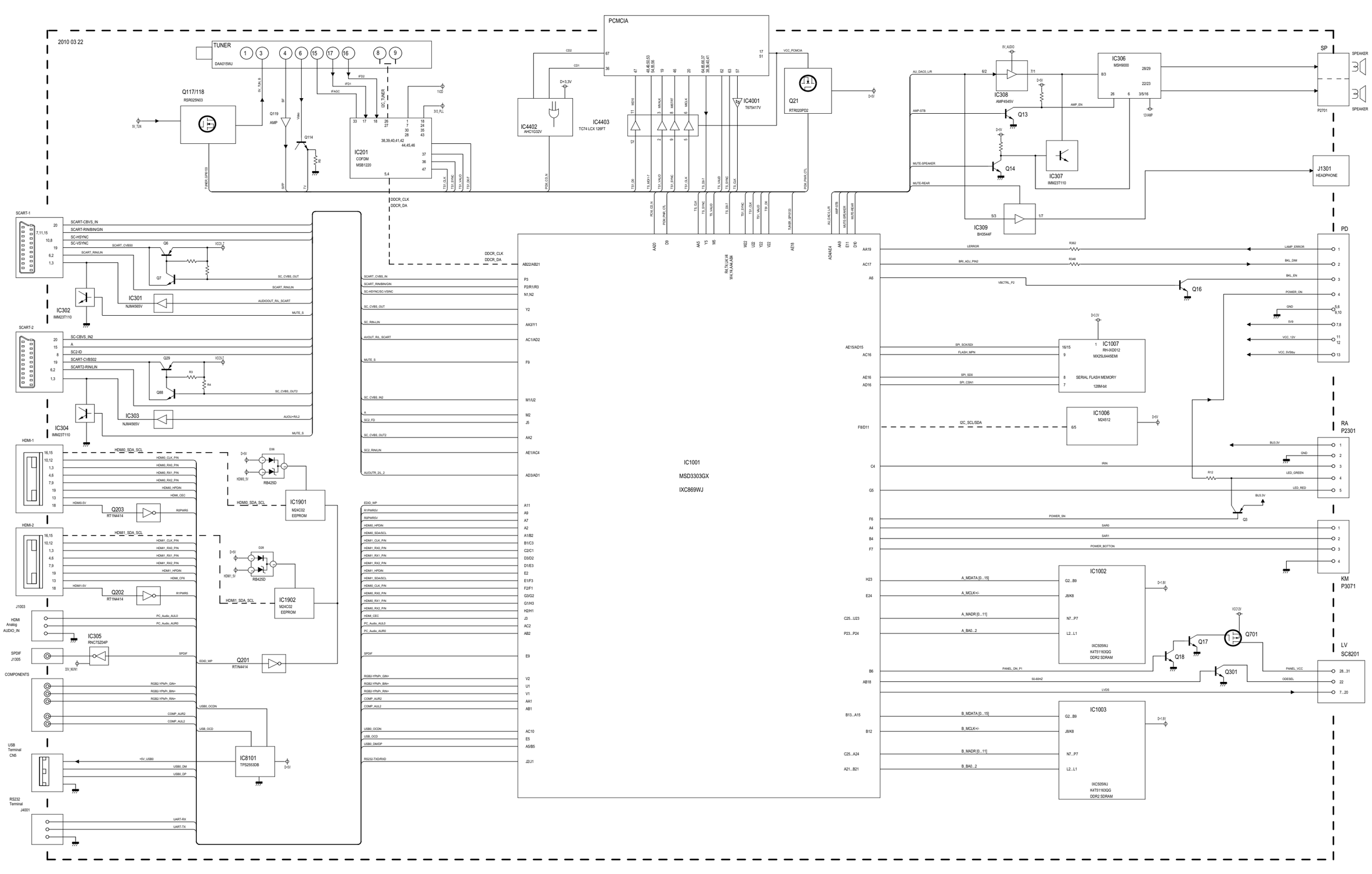
OVERALLL WIRING DIAGRAM



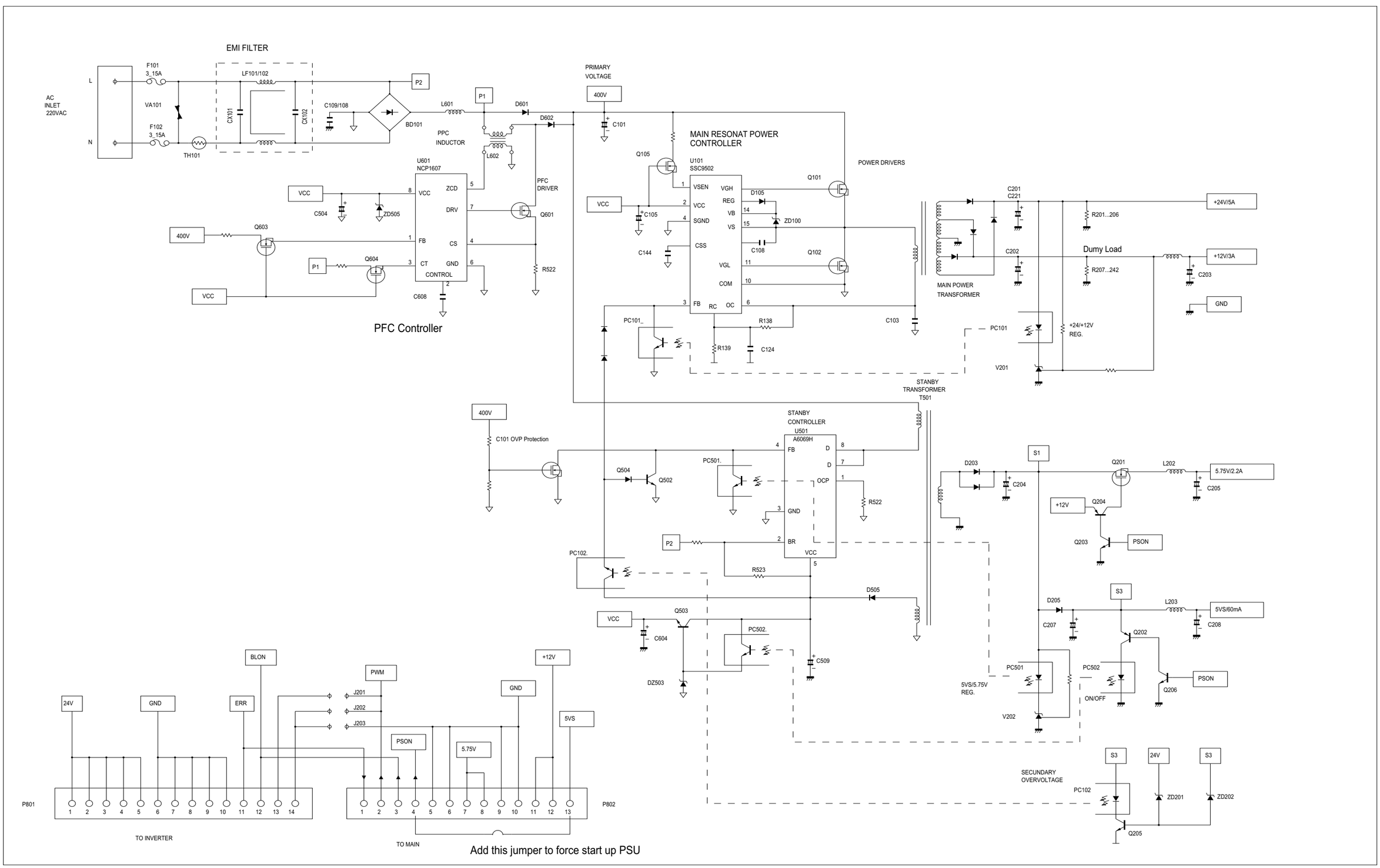
SYSTEM BLOCK DIAGRAM



MAIN BLOCK DIAGRAM



POWER BLOCK DIAGRAM



SCHEMATIC DIAGRAMS

Description:

VOLTAGE MEASUREMENT CONDITION:

1. The voltages at test points are measured on the stable supply voltage of AC 230V. Signals are fed by a color bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted. (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted. (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.

Ⓒ: Solid Ⓦ: Cement
Ⓢ: Oxide Film Ⓣ: Special
Ⓝ: Metal Coating

CAPACITOR

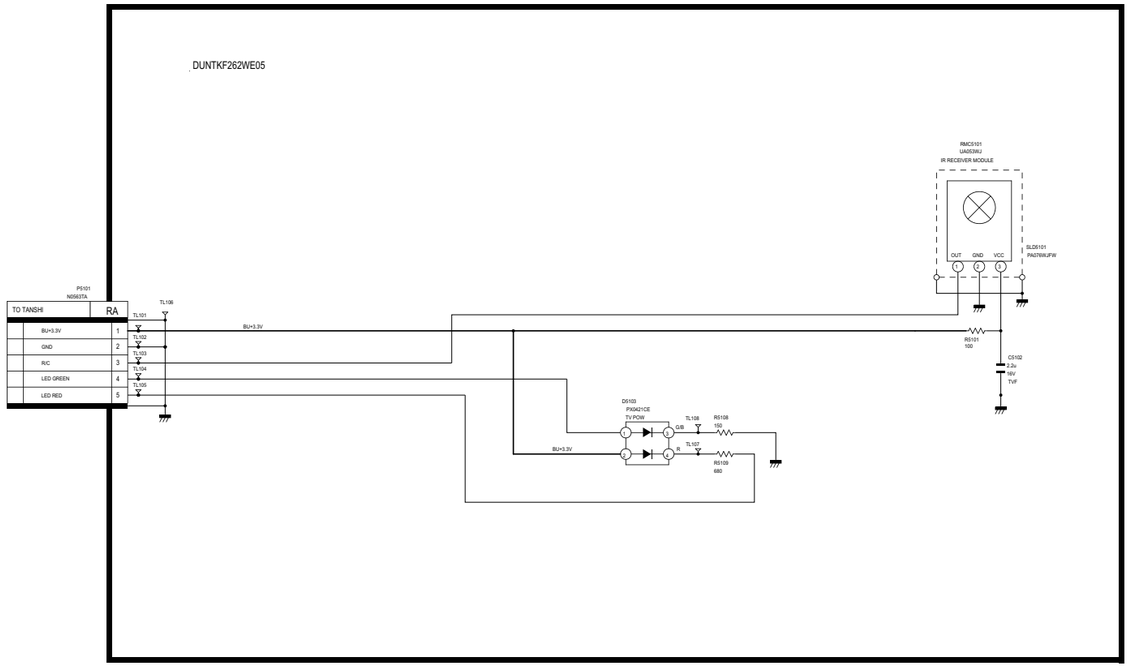
1. All capacitors are μF, unless otherwise noted. (P=pF=μμ F).
2. All capacitors are 50V, unless otherwise noted.
3. All capacitors are Ceramic type, unless otherwise noted.

(ML): Mylar (TA): Tantalum
(PF): Polypro Film (ST): Styrol

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

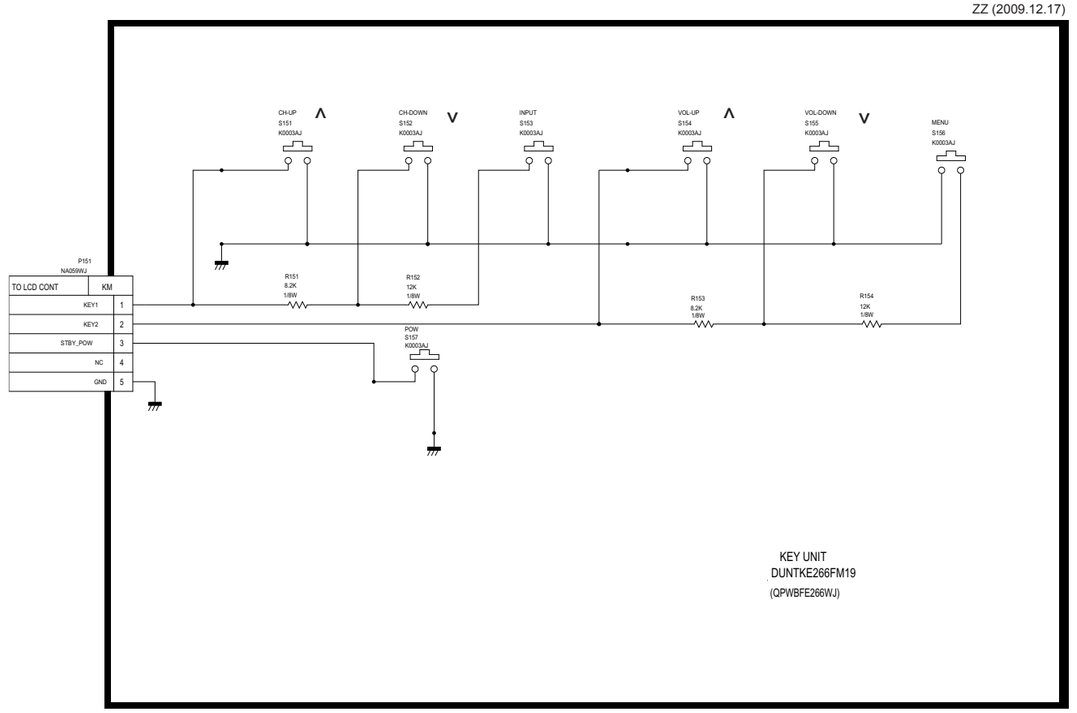
IMPORTANT SAFETY NOTICE:
PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

LED Unit Diagram DUNTKF262WE05



KEY Unit Diagram DUNTKE266FM19

ZZ (2009.12.17)



Main Unit Diagram 1/13 (System Power) DUNTKF261WE05

DUNTKF261WE05

P1701
N0185FJ
PD

LAMP ERR	1	TP173
BKL_DIM	2	TP126
BKL_EN	3	TP114
POWER ON	4	TP115
GND	5	TP116
GND	6	TP117
5V9	7	TP185
5V9	8	TP119
GND	9	TP172
GND	10	TP121
VCC12V	11	TP186
VCC12V	12	TP123
VCC5V Stby	13	TP171
		TP125

D+3.3V, D+5V, R361 10K, R327 4.7K, R362 100, R345 100, R330 10K, R329 4.7K, Q16 VS2SC3928AR-1, CZF C332 0.1u

003 LERROR
003 BRI_ADJ-PWM2
003 VBLCTRL-P2
POWER_ON
003 POWER_ON

TP183, TP184, 5V9, VCC12V, BU5V

IC701
R703 10K, *D701 HSU119, TP174, C702 1u, C703 100u 6.3V

VCC12V, 12VAMP, VCC12_T, L1 0209TA, L2 0209TA

*IC702
IXC882WJ
ADJ, IN, TP127, D+3.3V, D+5V, C19 100u 6.3V, C7 0.1u, C18 10u 16V, C12 0.1u

IC704
BSP100
TP129, VOUT, VIN, GND, BU5V, BU3.3V, C2 10u 16V, C3 0.1u, C4 10u 16V, C6 0.1u

5V9, L3 0209TA, C30 120u 10V, C8 0.1u

IC703
R4 100K, R14 1K, C16 6800P, C13 1u, C17 0.01u, R15 100, C15 0.022u, L4 RCILPA76ZWJQZ, D1 SMAB33L, C5 220u 16V, C9 1u, C10 0.1u, D+1.2V, TP131, TP132, R8 2K, R7 1.2K
SS, BOOT, EN, VIN, COMP, SW, FB, GND
LV5893M

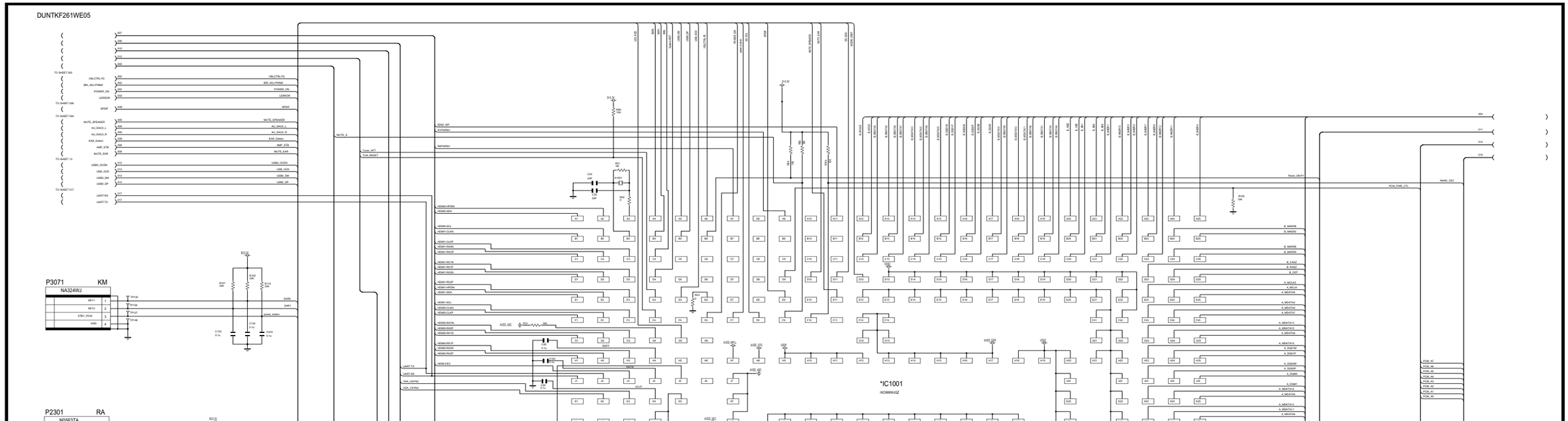
D+3.3V, D+1.8V, TP133, C21 100u 6.3V, C22 0.1u, L6 0209TA, C20 10u 16V, C23 0.1u, TP134

*IC705
IXC883WJ
ADJ, IN

LUG1701, LUG1702, LUG1703, LUG1704

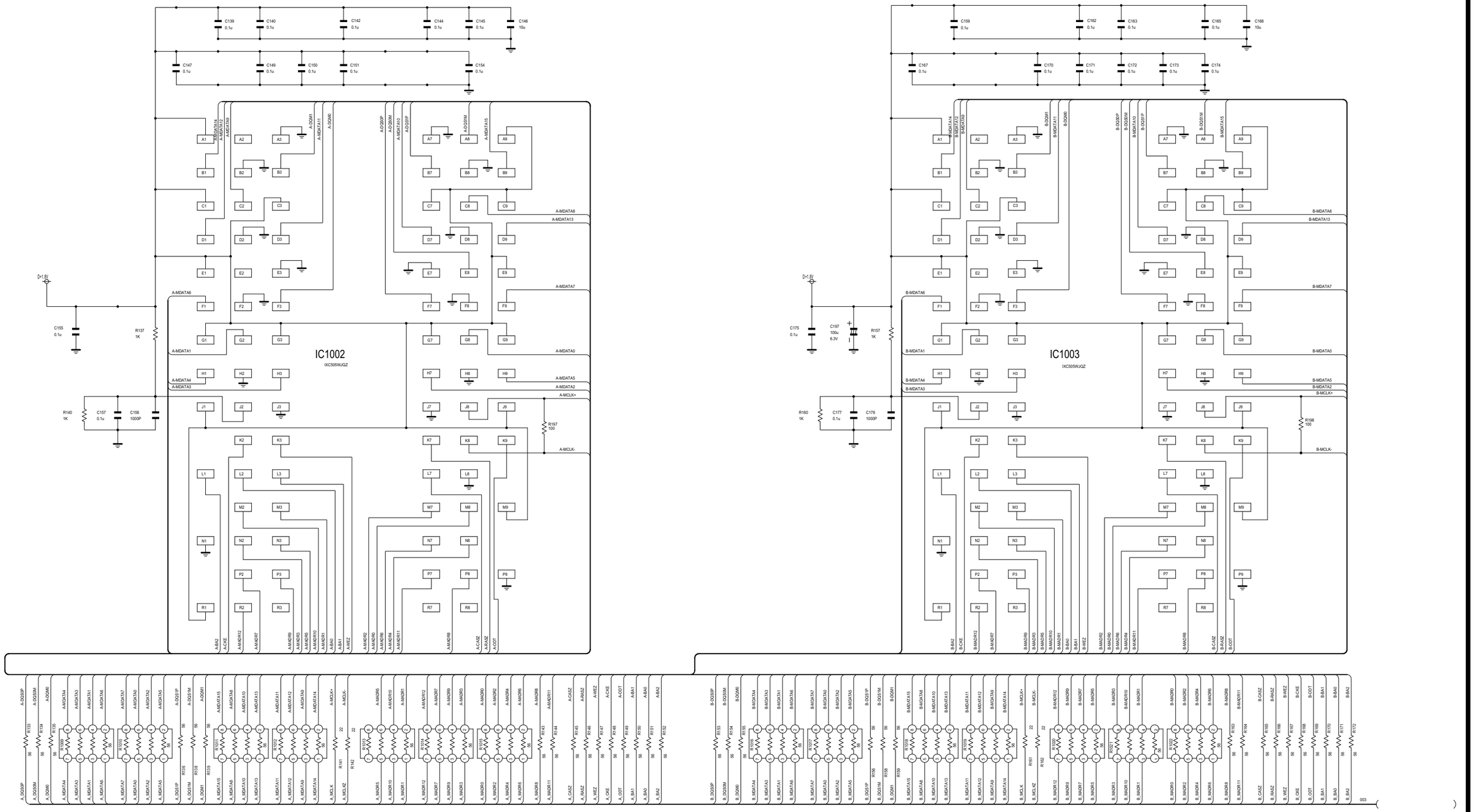
NAME	CODE
System Power	DH510
MAIN BOARD SHT02/17	
DATE 21-01-2010 N1 / ATV N.	SHARP

Main Unit Diagram 2/13 (MSTAR IC) DUNTKF261WE05



Main Unit Diagram 3/13 (DDR BLOCK) DUNTKF261WE05

DUNTKF261WE05



NAME	CODE
DDR BLOCK	DH510
MAIN BOARD SHT04/17	
DATE N1 17-12-2009 / KAV N.	SHARP

Main Unit Diagram 4/13 (SCART) DUNTKF261WE05

DUNTKF261WE05

SC1101
ZA161WJ

SC1102
ZA161WJ

IC301
NJM4565V

IC302
IMH23T110

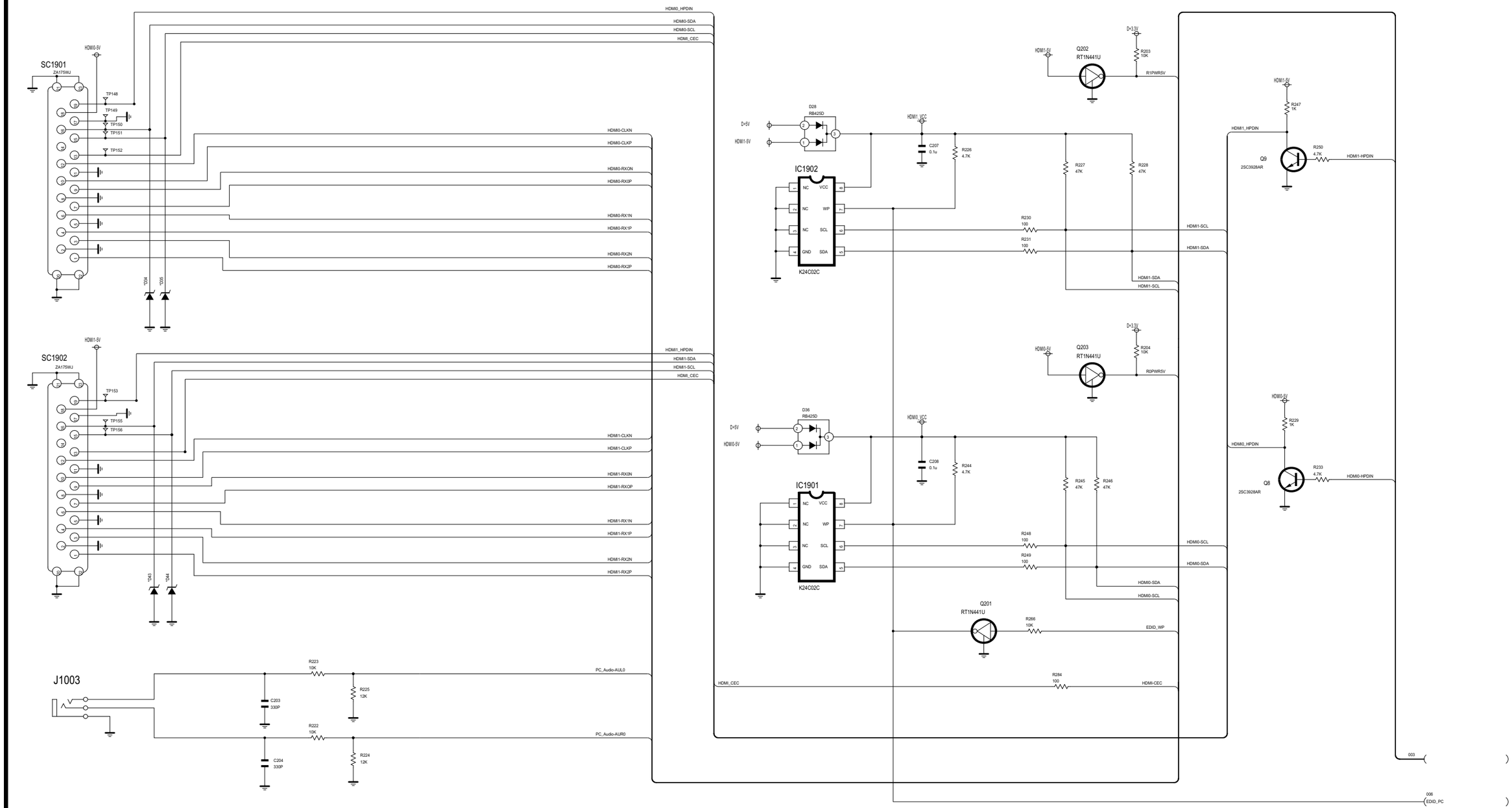
IC303
NJM4565V

IC304
IMH23T110

*IC706
NJ78L09U

NAME	CODE
SCART	DH510
MAIN BOARD SHT 5/17	
DATE N1 21-01-2010 / KAV N.	SHARP

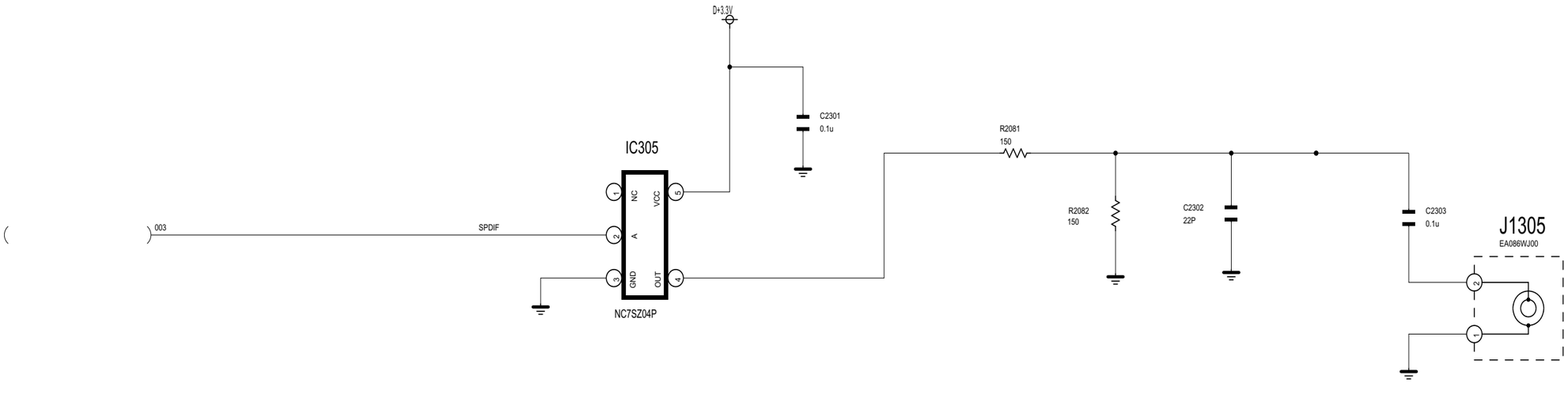
Main Unit Diagram 5/13 (HDMI INTERFACE) DUNTKF261WE05



NAME	CODE
HDMI INTERFACE	DH510
MAIN BOARD SHT07/17	
DATE 23-02-2010 / N1 / ATV N.	SHARP

Main Unit Diagram 6/13 (AUDIO INTERFACE) DUNTKF261WE05

DUNTKF261WE05



NAME	CODE
AUDIO INTERFACE	DH510
MAIN BOARD SHT008/17	
DATE N1 29-10-2009 / KAV N.	SHARP

Main Unit Diagram 7/13 (AUDIO AMP. INTERFACE) DUNTKF261WE05

DUNTKF261WE05

TO SHEET 003

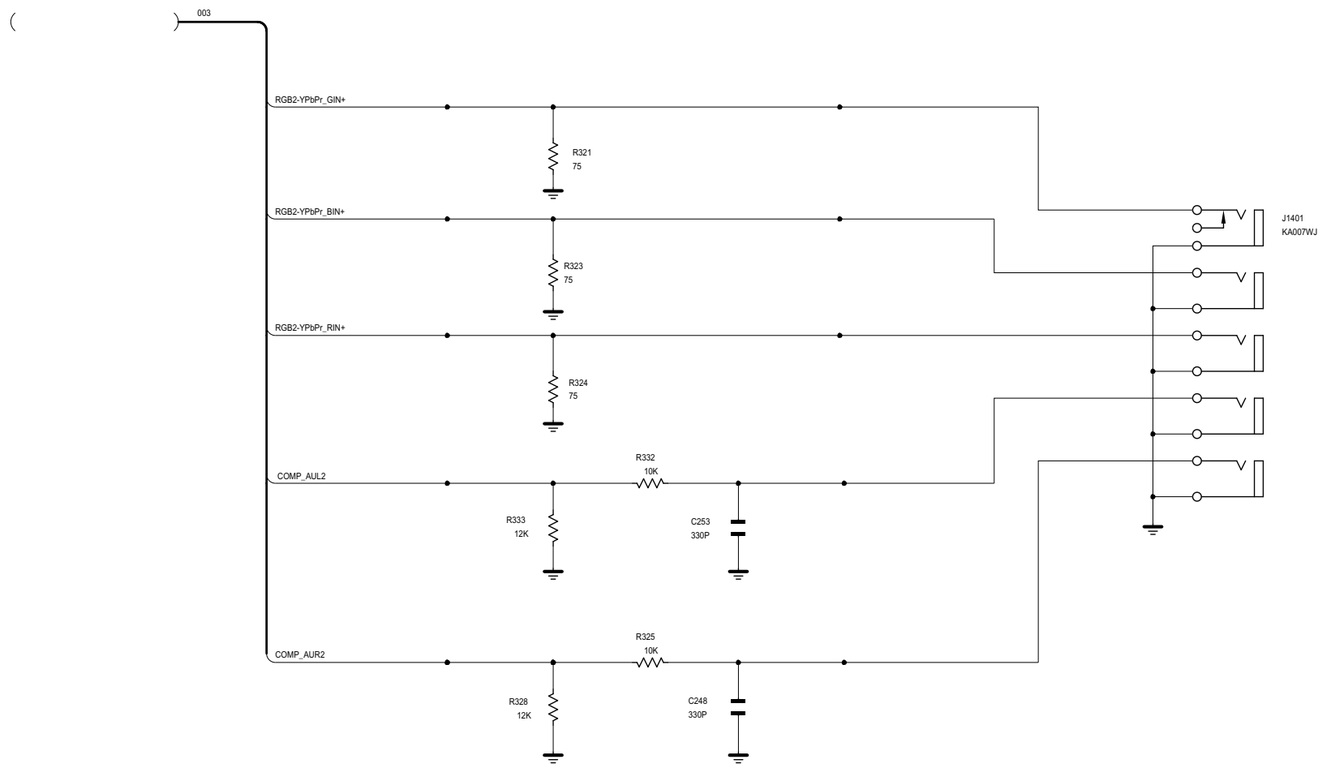
MUTE_SPEAKER
AMP_STB
AU_DAC0_L
MUTE_EAR
AU_DAC0_R
EAR_Detect

IC309
IC306
IXC867WJQZ
IC308
NJM4565V
IC307
IMH23T110
J1301
JA014WU
P2701
NA160WJ
speaker_R+
speaker_R-
speaker_L-
speaker_L+

NAME	CODE
AUDIO AMP. INTERFACE	DH510
MAIN BOARD SHT09/17	
DATE N1 17-12-2009 / ATV N.	SHARP

Main Unit Diagram 8/13 (VIDEO INTERFACE) DUNTKF261WE05

DUNTKF261WE05



NAME	CODE
VIDEO INTERFACE	DH510
MAIN BOARD SHT010/17	
DATE N1 17-12-2009 / KAV N.	SHARP

Main Unit Diagram 9/13 (PANEL INTERFACE) DUNTKF261WE05

DUNTKF261WE05

SC8201
NA493WJ

		GND	32
		PANEL-VCC	31
		PANEL-VCC	30
		PANEL-VCC	29
		PANEL-VCC	28
		GND	27
		GND	26
		GND	25
		GND	24
		SELLVDS	23
		ODSEL	22
		GND	21
		G3-RXE0-	20
		G3-RXE0+	19
		GND	18
		G1-RXE1-	17
		G0-RXE1+	16
		GND	15
		B7-RXE2-	14
		B6-RXE2+	13
		GND	12
		B5-RXEC-	11
		B4-RXEC+	10
		GND	9
		B3-RXE3-	8
		B2-RXE3+	7
		GND	6
		NC	5
		NC	4
		GND	3
		GND	2
		GND	1

LV

TP164
TP165
PANEL-VCC
R354 0
R357 22
R358 22
R363 22
R364 22
G3-RXE0-
G2-RXE0+
G1-RXE1-
G0-RXE1+
B7-RXE2-
B6-RXE2+
B5-RXEC-
B4-RXEC+
B3-RXE3-
B2-RXE3+

VCC12V
L36
C265 10u
C262 0.1u
PANEL_VCCIN
R347 10K
R352 100
R348 4.7K
C263 0.1u
Q701
RSS040P03
PANEL-VCC
TW R359 0.56
TW R360 0.56
C261 0.1u
D+5V
R349 4.7K
R350 1K
Q17
2SC3928AR
R351 1K
Panel_ON-P1
Q18
2SC3928AR

003

NAME	CODE
PANEL INTERFACE	DH510
MAIN BOARD SHT011/17	
DATE N1 21-01-2009 / ATV N.	SHARP

Main Unit Diagram 10/13 (TUNER) DUNTKF261WE05

DUNTKF261WE05

TU201
AA019WJQZ

IC201

IC202 BSP100

IC203

IC204 BSP100

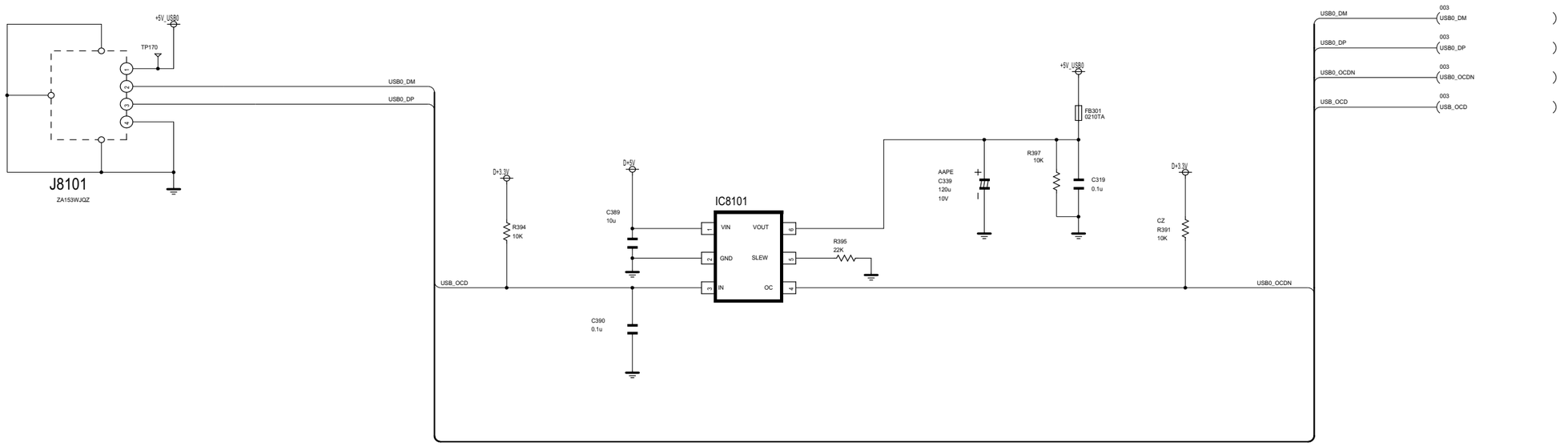
Q114 2SC3928AR
Q117 RSR025P03
Q118 2SC3928AR
Q119 2SC3928AR

X201 SCA077WJ

NAME	CODE
TUNER	DH510
MAIN BOARD SHT12/17	
DATE N1 29-10-2009 / ATV N.	SHARP

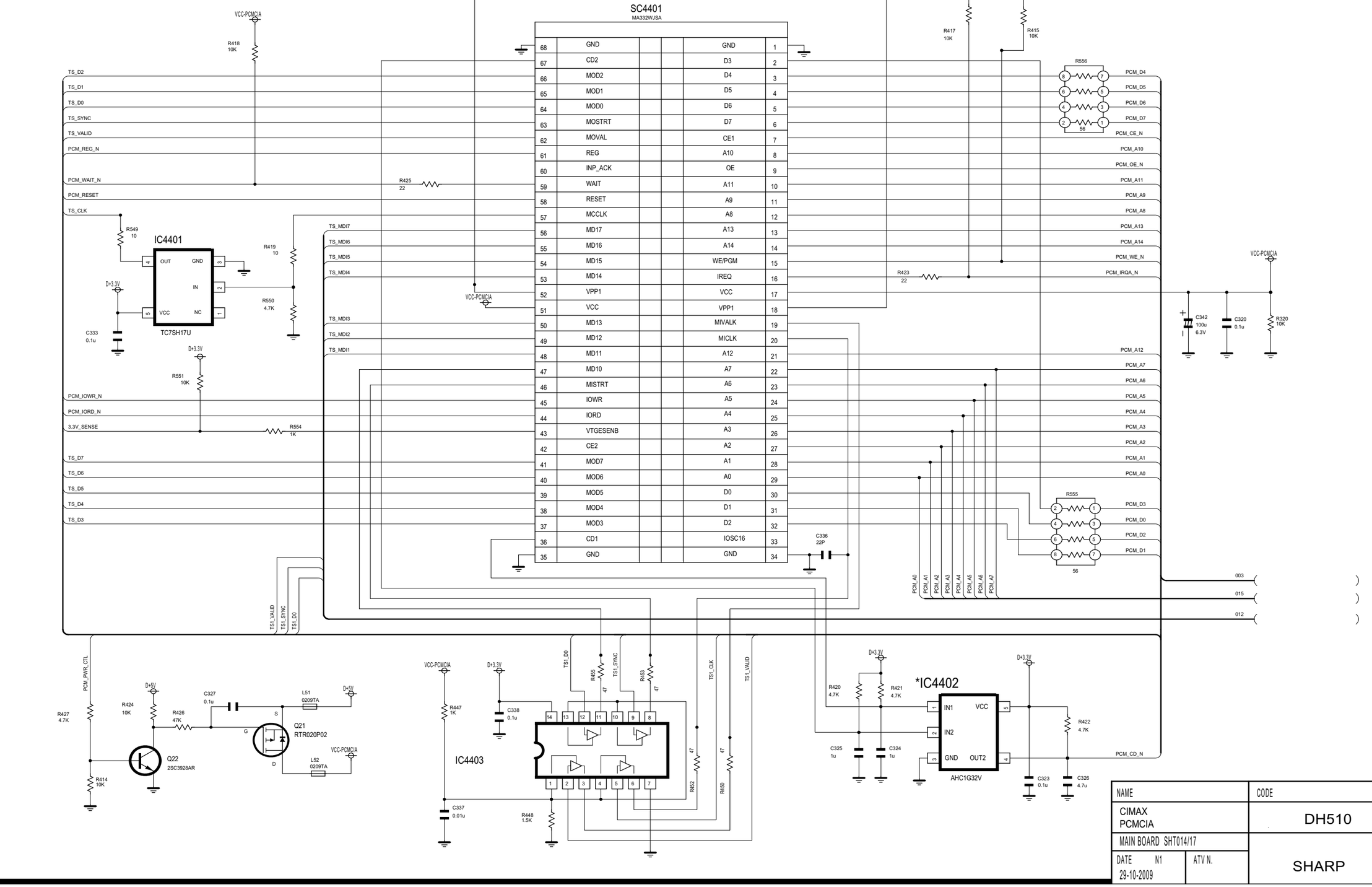
Main Unit Diagram 11/13 (USB) DUNTKF261WE05

DUNTKF261WE05



NAME	CODE
USB	DH510
MAIN BOARD SHT13/17	
DATE N1 29-10-2009 / KAV N.	SHARP

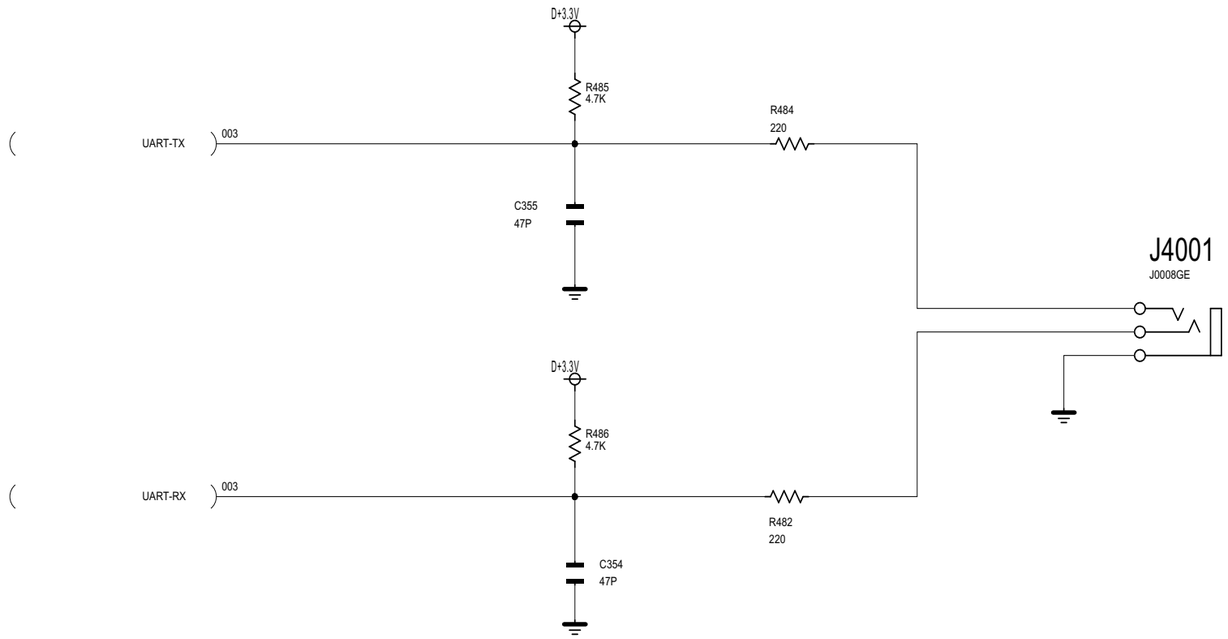
Main Unit Diagram 12/13 (CIMAX PCMCIA) DUNTKF261WE05



NAME	CODE
CIMAX PCMCIA	DH510
MAIN BOARD SHT014/17	
DATE N1 29-10-2009 / ATV N.	SHARP

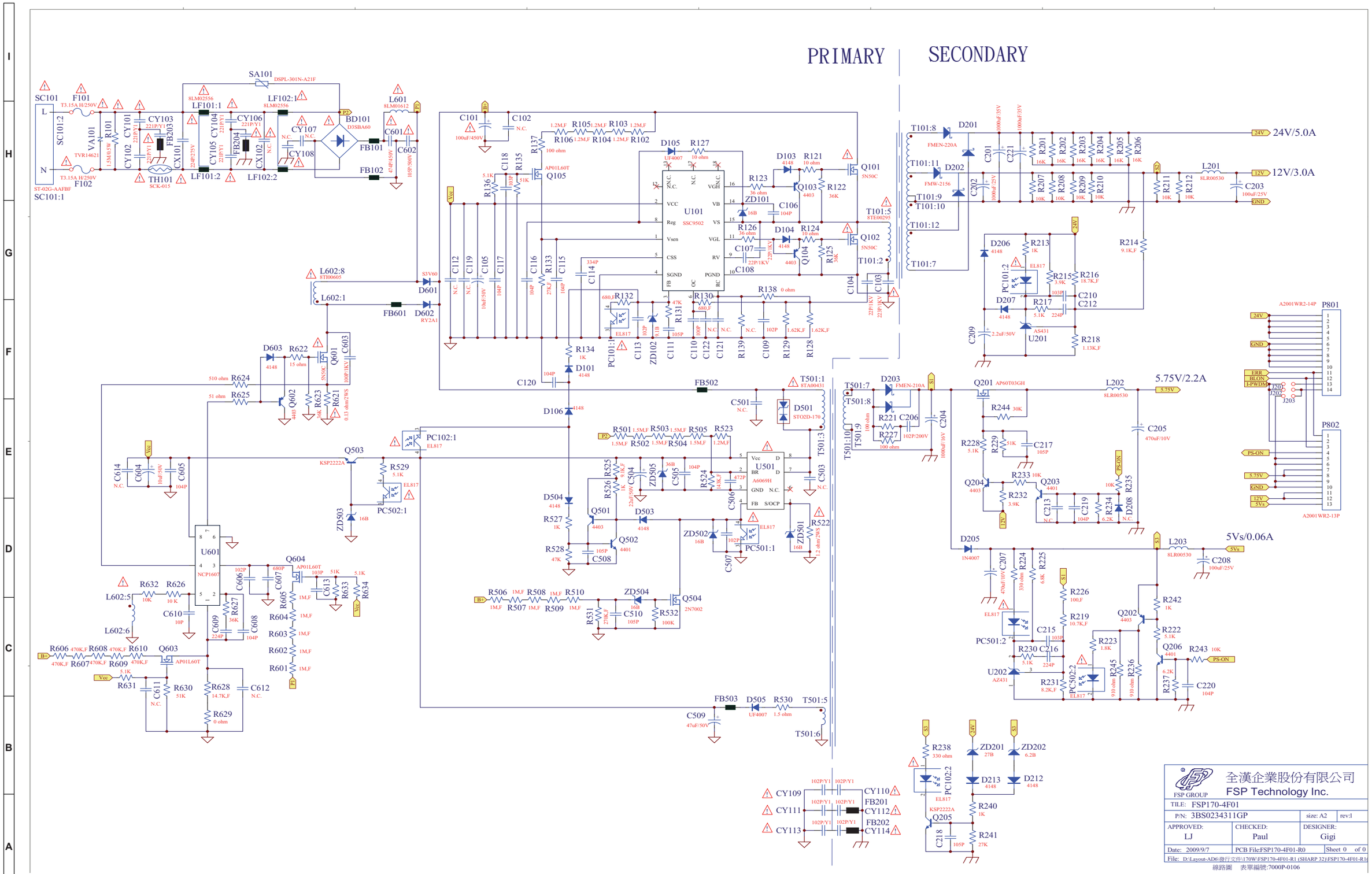
Main Unit Diagram 13/13 (RS232) DUNTKF261WE05

DUNTKF261WE05



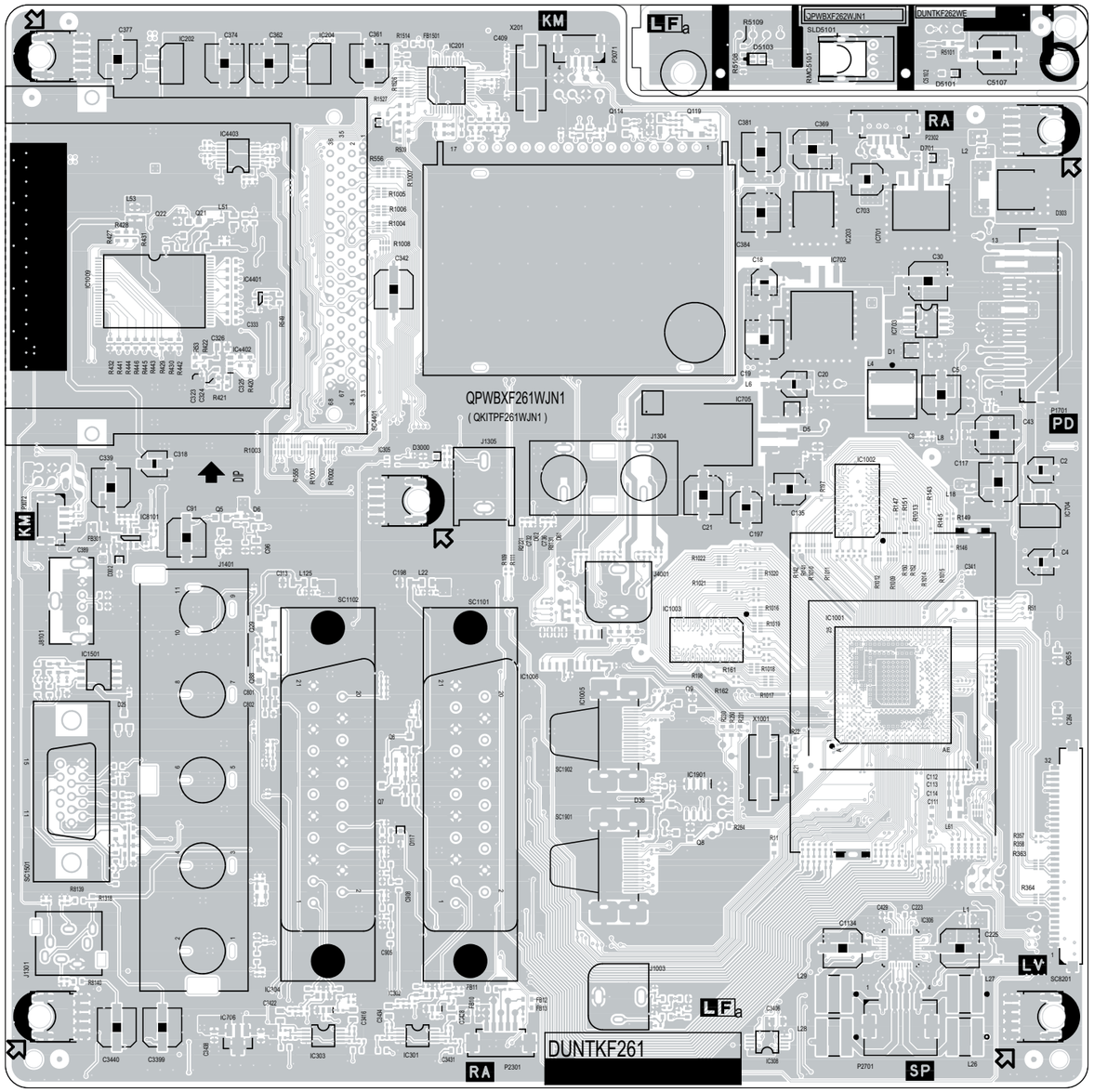
NAME	CODE
RS232	DH510
MAIN BOARD SHT017/17	
DATE N1 29-10-2009 / KAV N.	SHARP

Power Supply Diagram RDENCA366WJQZ

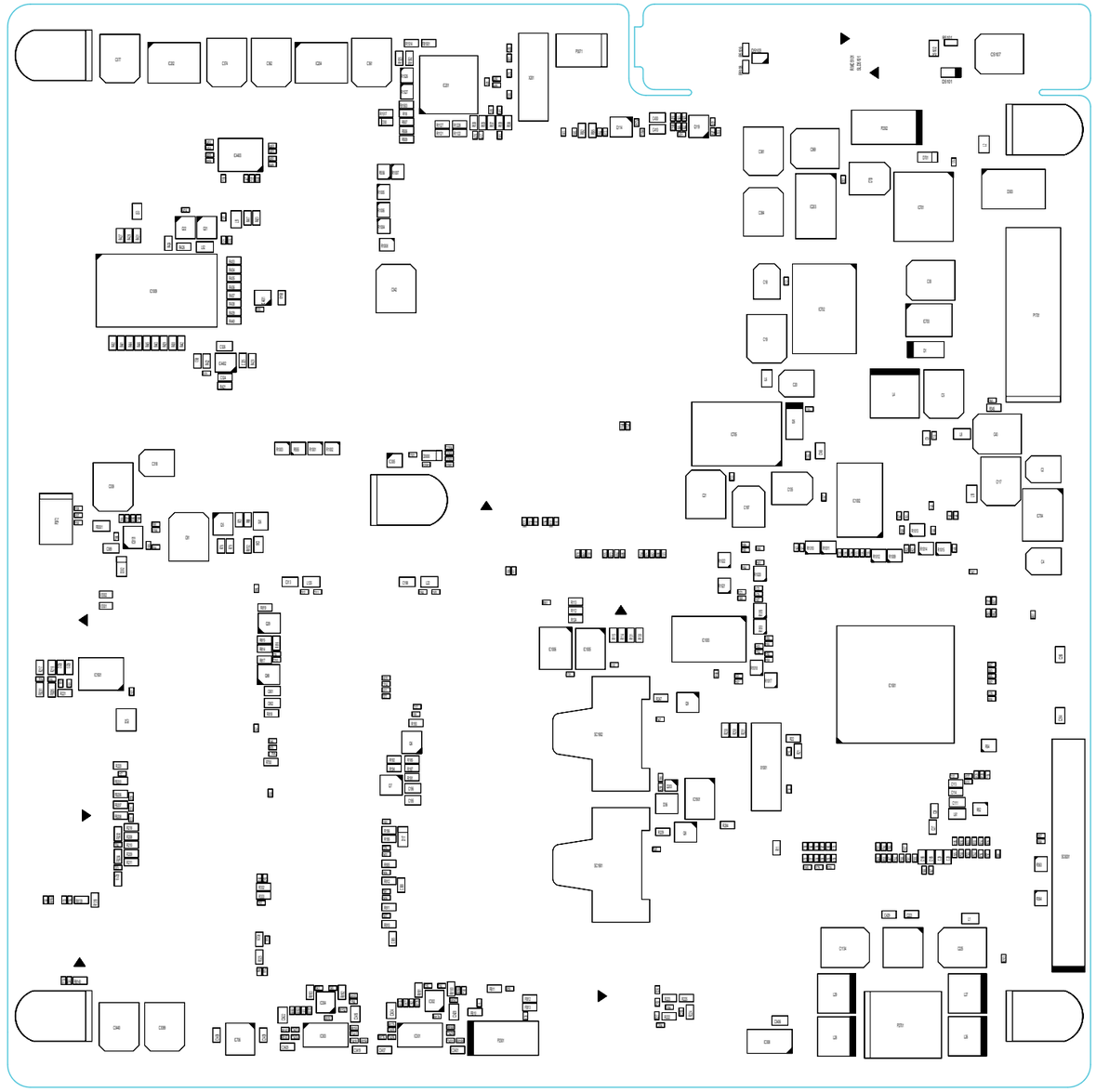


PRINTED WIRING BOARD

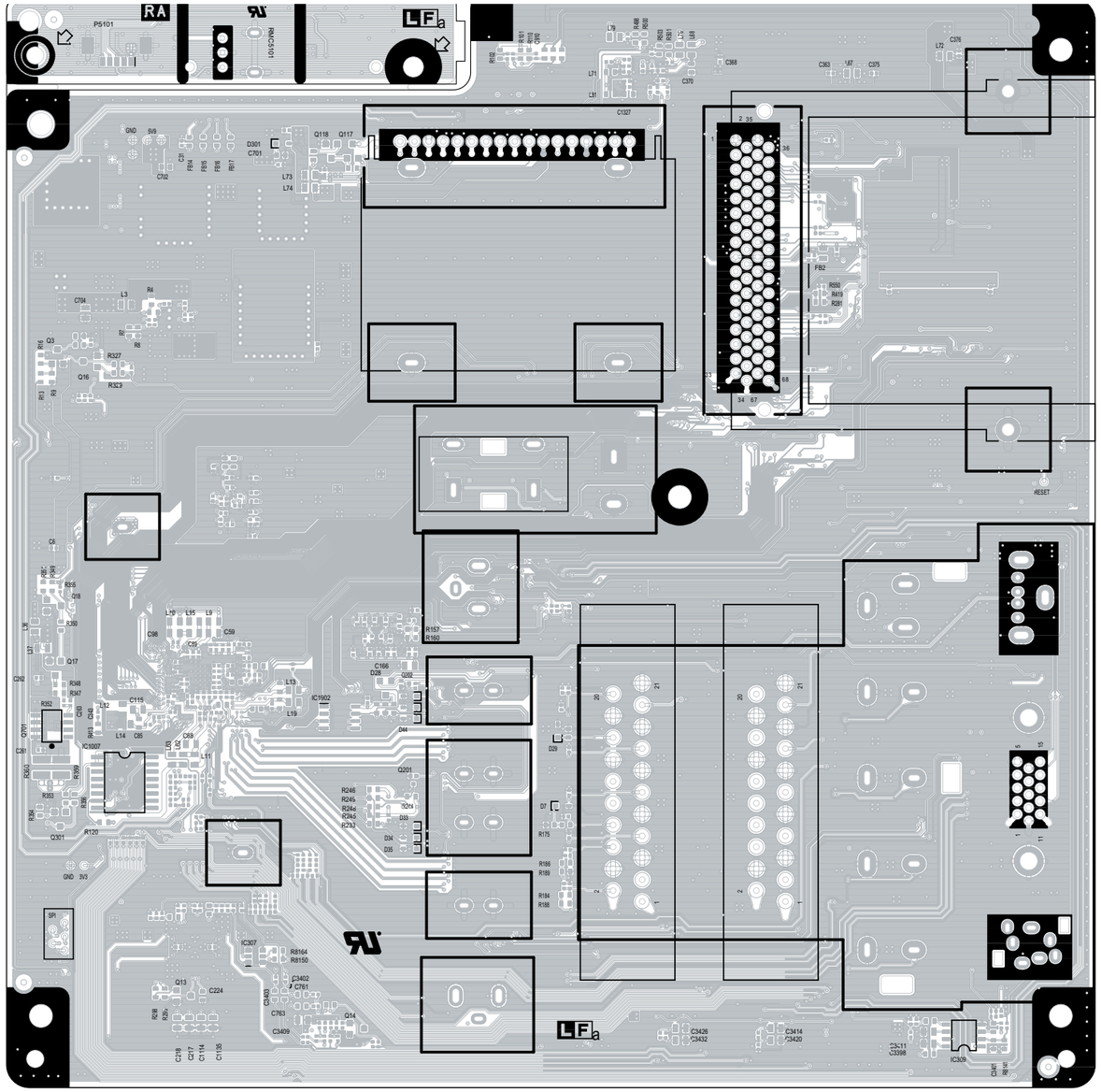
Main Unit PWB (QPWBXF261WJN1)
LED Unit PWB (QPWBXF262WJN1)
Side A



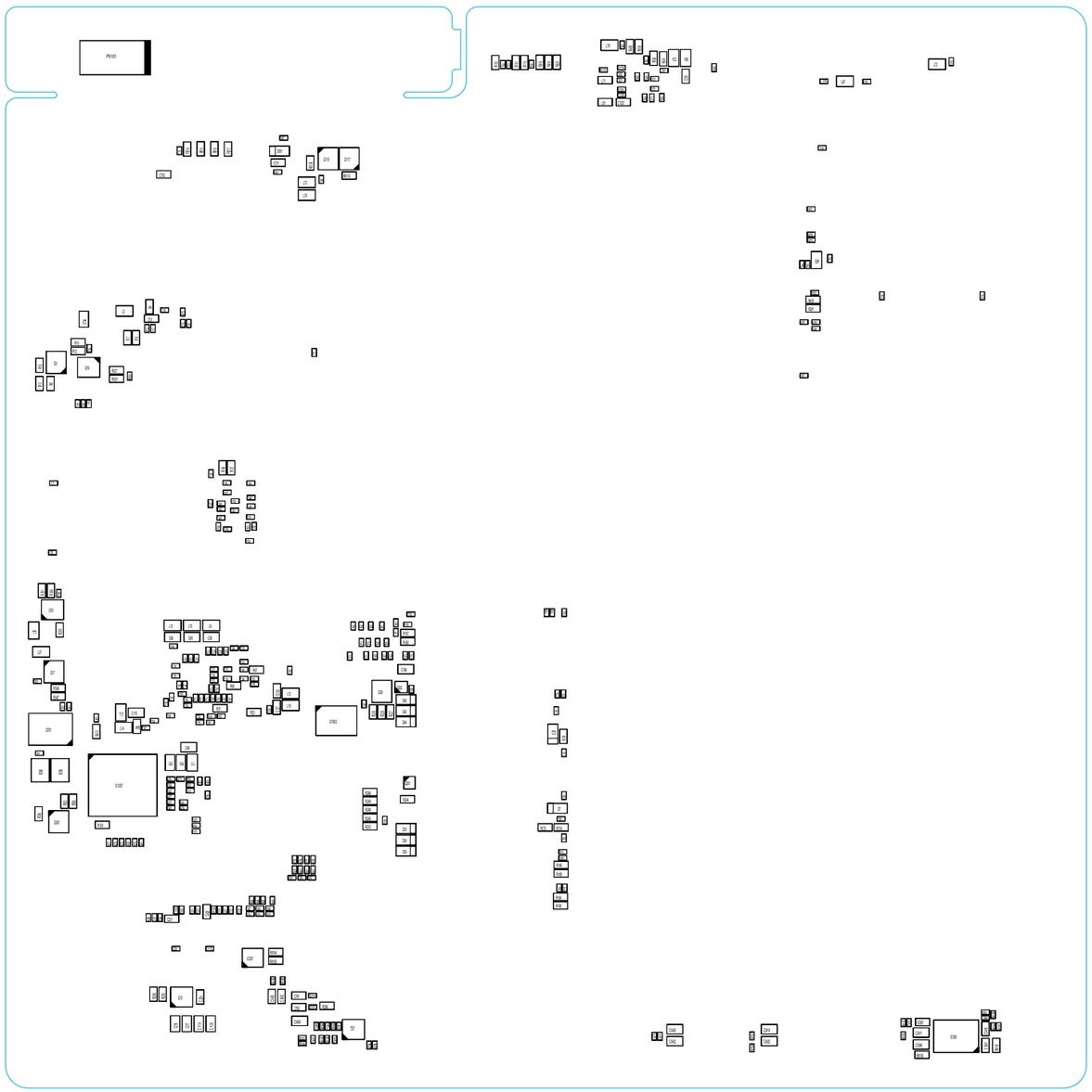
Side A Chip Parts



Main Unit PWB (QPWBXF261WJN1)
LED Unit PWB (QPWBXF262WJNN1)
Side B

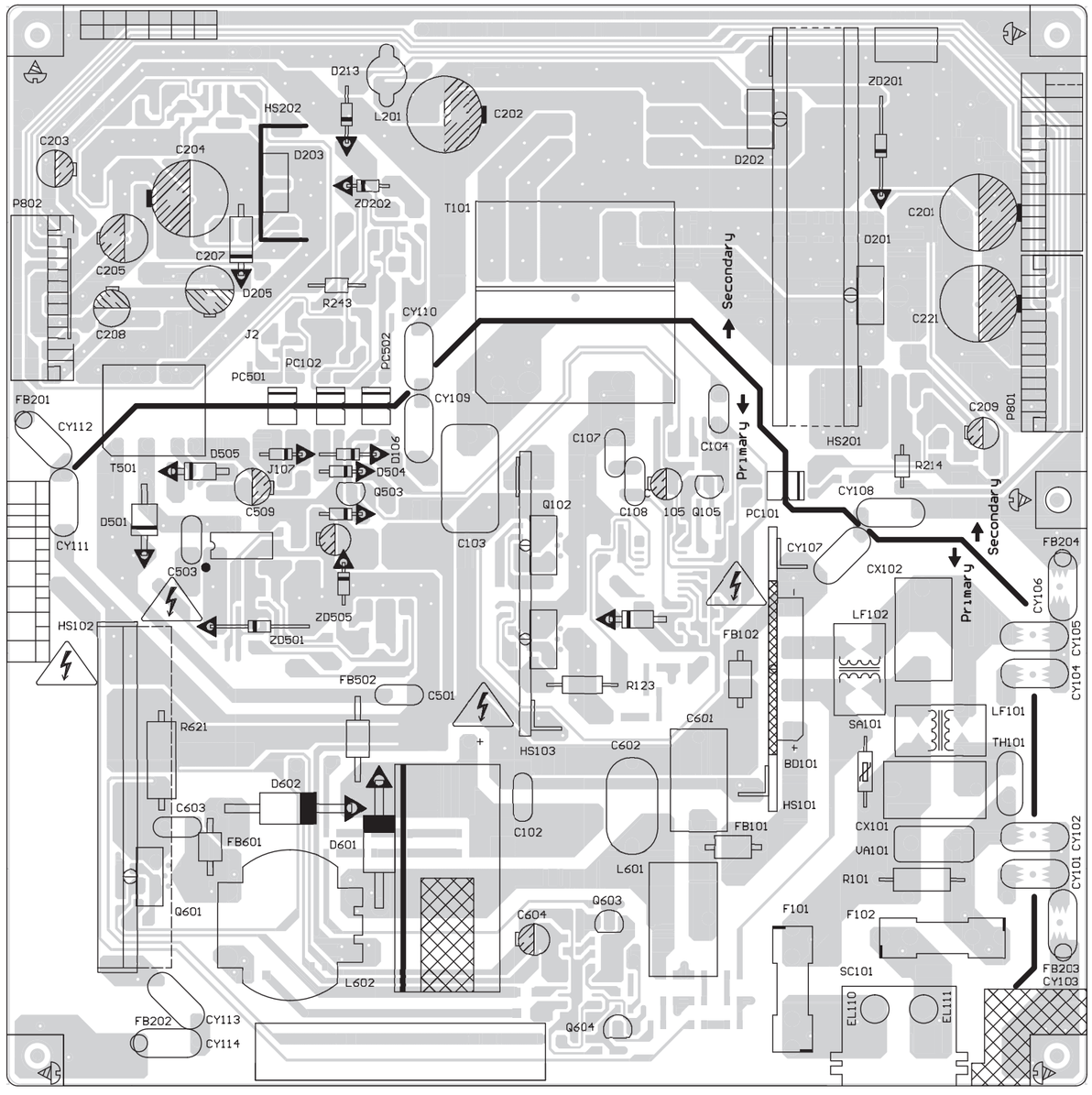


Side B Chip Parts

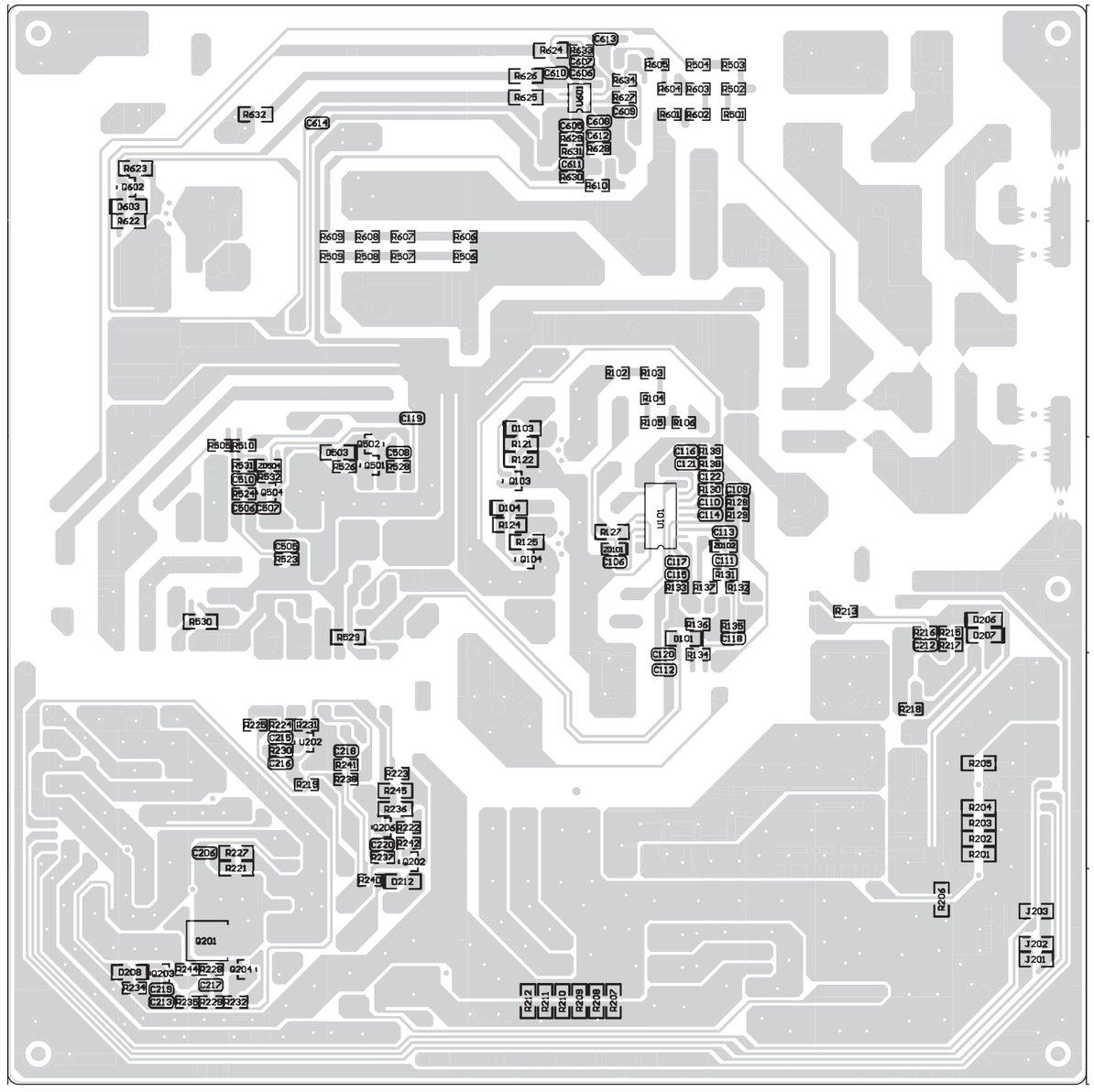


Power Unit PWB (RDENCA366WJQZ)

Power Unit, Side A

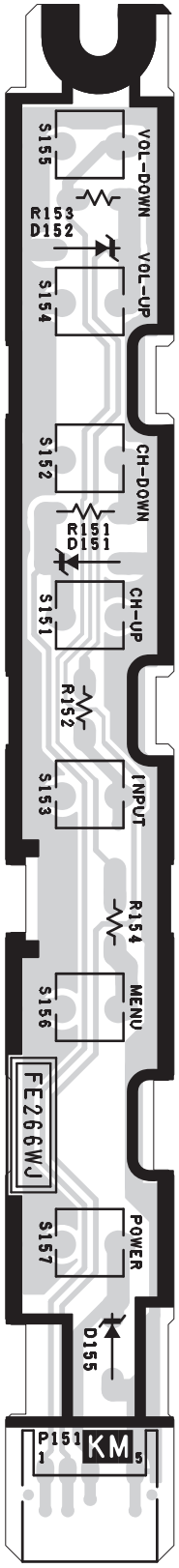


Power Unit, Side B

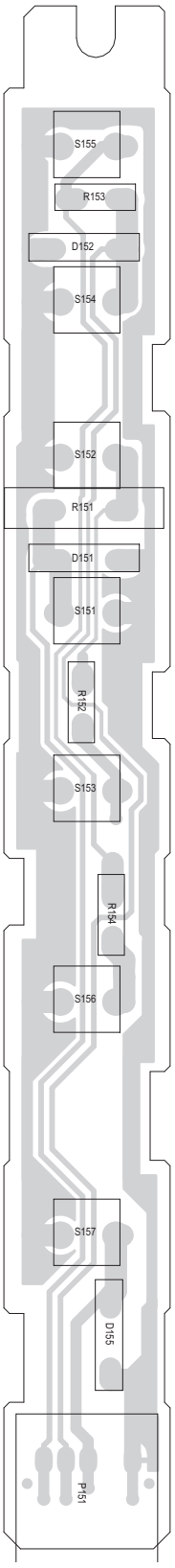


KEY Unit PWB (QPWBXF266WJ)

KEY Unit, Side A



KEY Unit, Side A Chip Pats



PARTS LISTING

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual.
Electrical components having such features are identified by ⚠ in the Replacement Parts Listing.

The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.
Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.
1. MODEL NUMBER 2. REF. NO. 3. PART NO.
4. DESCRIPTION 5. CODE 6. QUANTITY

MARK *: SPARE PARTS DELIVERY SECTION

	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
			LCD PANEL			
			NOTE : THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY			
		R1LK315T3LA57Y	PANEL 32" WXGA SMPL LK315T3LA57	S	CC	CQ
			PRINTED WIRING BOARDS			
		DSETUF261WE05	MAIN/LED UNIT 32DH510E	S	AV	BG
		DUNTKE266FM19	KEY UNIT	S	AB	AG
⚠		RDENCA366WJQZ	POWER SUPPLY	S	AV	BG
			DUNTKF261FM05			
			MAIN Unit			
			INTEGRATED CIRCUITS			
	IC 0201	RH-IXC868WJZZQ	IC COFDM MSB1220 LQFP 48	S	AF	AQ
	IC 0202	RH-IXC881WJZZY	IC APL1117-33VC-TRG	S	AA	AB
	IC 0203	VHIBA50B0WP-1Y	IC BA50BC0WFP-E2	S	AA	AD
	IC 0204	RH-IXD112WJZZY	CI APL1117-12VC-TRG SOT-223 ANPEC	S	AA	AB
	IC 0301	VHINJM4565V-1Y	IC NJM4565V-TE1	S	AA	AB
	IC 0302	VSIMH23T110-1Y	TRT IMH23T110	S	AA	AB
	IC 0303	VHINJM4565V-1Y	IC NJM4565V-TE1	S	AA	AB
	IC 0304	VSIMH23T110-1Y	TRT IMH23T110	S	AA	AB
	IC 0305	VHINC7SZ04P-1Y	IC NC7SZ04P5X	S	AA	AA
	IC 0306	RH-IXC867WJQZQ	IC MSH9000-LF AUDIO OUT MSTAR QFN40	S	AD	AM
	IC 0307	VSIMH23T110-1Y	TRT IMH23T110	S	AA	AB
	IC 0308	VHINJM4565V-1Y	IC NJM4565V-TE1	S	AA	AB
	IC 0309	VHIBH3544F+-1Y	IC BH3544F-E2	S	AA	AC
	IC 0701	RH-IXC913WJZZY	ICBA50DD0WHFP HPR5 ROHM	S	AB	AF
	IC 0702	RH-IXC882WJZZY	IC APL1084-33GC-TRG	S	AA	AC
	IC 0703	VHILV5893M+-1Y	IC LV5893M-TE-L-E	S	AA	AD
	IC 0704	RH-IXC881WJZZY	IC APL1117-33VC-TRG	S	AA	AB
	IC 0705	RH-IXC883WJZZY	IC AP1084K18-L13 TO-263AB	S	AA	AD
	IC 0706	VHINJ78L09U-1Y	IC NJM78L09UA-TE1	S	AA	AC
	IC 1001	RH-IXC869WJQZQ	IC MSD3303GX-LF-T1 VIDEO-AUDIO PROCESSOR	S	AT	BE
	IC 1002	RH-IXC505WJQZQ	IC MEMO 512MB / DDR2 RAM	S	AE	AM
	IC 1003	RH-IXC505WJQZQ	IC MEMO 512MB / DDR2 RAM	S	AE	AM
	IC 1006	RH-IXD043WJZZY	RH-IXC986WJZZY AND DATA LC32DH500E_HDCP_KEY	S	AG	AT
	IC 1007	RH-IXD147WJZZY	RH-IXD012WJZZY AND LC32DH510E_MERGE_V1.23	S	AN	AZ
	IC 1901	RH-IXD041WJZZY	VHIM24C02W61EY AND DATA LC32DH500E_HDMI_1_EDID	S	AG	AR
	IC 1902	RH-IXD042WJZZY	VHIM24C02W61EY AND DATA LC32DH500E_HDMI_2_EDID	S	AG	AR
	IC 4401	VHITC7SH17U-1Y	IC TC7SH17FU(TE85L,F)	S	AA	AA
	IC 4402	VHIAHC1G32V-1Y	IC 74AHC1G32GV,125	S	AA	AA
	IC 4403	RH-IXD045WJZZY	IC TC74LCX126FT(EK2,M) TOSHIBA	S	AA	AB
	IC 8101	RH-IXC975WJZZY	IC TPS2553DBVT-1	S	AB	AF
			TRANSISTORS			
	Q 0003	VS2SA1530AR-1Y	TRT SA1530A-T12-1R MITSUBISHI	S	AA	AA
	Q 0005	VS2SA1530AR-1Y	TRT SA1530A-T12-1R MITSUBISHI	S	AA	AA
	Q 0006	VS2SA1530AR-1Y	TRT SA1530A-T12-1R MITSUBISHI	S	AA	AA
	Q 0007	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0008	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0009	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0013	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0014	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0016	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0017	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0018	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0021	VSRTR020P02-1Y	TRT RTR020P02TL	S	AA	AC
	Q 0022	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0029	VS2SA1530AR-1Y	TRT SA1530A-T12-1R MITSUBISHI	S	AA	AA
	Q 0088	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0114	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0117	VSRSR025P03-1Y	TRT RSR025P03TL	S	AA	AB
	Q 0118	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0119	VS2SC3928AR-1Y	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0201	VSRT1N441U/-1Y	TRT RT1N441U-T111-1	S	AA	AA
	Q 0202	VSRT1N441U/-1Y	TRT RT1N441U-T111-1	S	AA	AA
	Q 0203	VSRT1N441U/-1Y	TRT RT1N441U-T111-1	S	AA	AA
	Q 0701	VSRSS040P03-1Y	TRT RSS040P03TB	S	AA	AC
			DIODES			
	D 0001	VHDSMAB33L+-1Y	DIODE SMAB33L-RTK/P	S	AA	AB
	D 0006	VHDDAN217U+-1Y	DIODE DAN217T106	S	AA	AA
	D 0007	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0008	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0009	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0010	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0011	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0012	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0013	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0014	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0015	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0016	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0028	VHDRB425D//-1Y	DIODE RB425DT146	S	AA	AB
	D 0029	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0034	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0035	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0036	VHDRB425D//-1Y	DIODE RB425DT146	S	AA	AB
	D 0043	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0044	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0077	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0078	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0079	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0080	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0081	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0082	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0085	RH-EXA675WJZZY	ZENER DIODE CDS2C16GTH ESD 16V 0402	S	AA	AA
	D 0117	RH-EXA523WJZZY	ZENER DIODE MAZ8056GML	S	AA	AA
	D 0701	VHDMA111G++-1Y	DIODE MA2J1110GL	S	AA	AA

	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
			PACKAGED CIRCUITS			
	X 0201	RCRSCA224WJZZY	CRYSTAL AT-41CD2-24.000MHz_20_N_NDK	S	AA	AC
	X 1001	RCRSCA225WJZZY	CRYSTAL AT-41CD2-12.000MHz_20_N_NDK	S	AA	AC
			COILS AND FILTERS			
	L 0001	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0002	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0003	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0004	RCILPA762WJQZY	COIL NR8040T330M 33UH 20%	S	AA	AB
	L 0006	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0008	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0009	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0010	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0011	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0012	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0013	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0014	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0015	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0018	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0019	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0022	RBLN-0210TAZZY	BALUNE BLM21PG221SN1D	S	AA	AA
	L 0026	RCILPA899WJZZY	COIL NR6045T220M 22UH 20%	S	AA	AB
	L 0027	RCILPA899WJZZY	COIL NR6045T220M 22UH 20%	S	AA	AB
	L 0028	RCILPA899WJZZY	COIL NR6045T220M 22UH 20%	S	AA	AB
	L 0029	RCILPA899WJZZY	COIL NR6045T220M 22UH 20%	S	AA	AB
	L 0036	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0051	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0052	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0061	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0067	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0068	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0071	RBLN-0253TAZZY	FERRITE BLM18PG121SND1D	S	AA	AA
	L 0072	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0073	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0074	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0078	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0079	RBLN-0209TAZZY	BALUNE BLM21PG600SN1D	S	AA	AA
	L 0081	RBLN-0253TAZZY	FERRITE BLM18PG121SND1D	S	AA	AA
	L 0125	RBLN-0210TAZZY	BALUNE BLM21PG221SN1D	S	AA	AA
			TUNER			
	TU 0201	RTUDAA019WJQZ	TUNER	S	AP	BA
			CAPACITORS			
	C 0002	VCEAPF1CN106MY	ELEC C 10UF 20% 16V	S	AA	AA
	C 0003	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0004	VCEAPF1CN106MY	ELEC C 10UF 20% 16V	S	AA	AA
	C 0005	VCEASK1CN227MY	ELEC C 220UF 20% 16V MVY16VC220MF80	S	AA	AB
	C 0006	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0007	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0008	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0009	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
	C 0010	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0012	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0013	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
	C 0014	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0015	VCKYCZ1CB223KY	CAPACITOR 22NF 16V 10%	S	AA	AA
	C 0016	VCKYCZ1CB682KY	CAPACITOR 6,8NF 16V 10%	S	AA	AA

	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
	C 0017	VCKYCZ1CB103KY	CAPACITOR 10NF 16V 10%	S	AA	AA
	C 0018	VCEAPF1CN106MY	ELEC C 10UF 20% 16V	S	AA	AA
	C 0019	VCEASX0JN107MY	ELEC C 100UF 6,3V MVL6,3VC100MF60E1	S	AA	AB
	C 0020	VCEAPF1CN106MY	ELEC C 10UF 20% 16V	S	AA	AA
	C 0021	VCEASX0JN107MY	ELEC C 100UF 6,3V MVL6,3VC100MF60E1	S	AA	AB
	C 0022	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0023	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0024	VCCCCZ1HH200JY	C CERAM 20PF 50V 5%	S	AA	AA
	C 0025	VCCCCZ1HH200JY	C CERAM 20PF 50V 5%	S	AA	AA
	C 0026	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
	C 0027	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
	C 0028	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
	C 0029	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
	C 0030	VCAAPE1AJ127MY	ELEC C 120UF 20% 10V LOW ESR	S	AA	AC
	C 0034	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0035	VCKYCZ1CB153KY	CAPACITOR 15NF 16V 10%	S	AA	AA
	C 0036	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0037	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0038	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0039	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0040	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0043	VCEASX0JN107MY	ELEC C 100UF 6,3V MVL6,3VC100MF60E1	S	AA	AB
	C 0046	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0049	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0051	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0053	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0054	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0055	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0057	VCKYCZ1CB153KY	CAPACITOR 15NF 16V 10%	S	AA	AA
	C 0058	VCKYCZ1CB153KY	CAPACITOR 15NF 16V 10%	S	AA	AA
	C 0059	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
	C 0062	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0064	VCKYCZ1CB153KY	CAPACITOR 15NF 16V 10%	S	AA	AA
	C 0065	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0066	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0067	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0068	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
	C 0070	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0071	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0073	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0074	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0080	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0081	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0082	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0084	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0085	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
	C 0086	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0087	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0088	VCKYCZ1HB102KY	CAPACITOR 1NF 50V 10%	S	AA	AA
	C 0089	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
	C 0090	VCKYCZ1CB153KY	CAPACITOR 15NF 16V 10%	S	AA	AA
	C 0091	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
	C 0092	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0093	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0094	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
	C 0095	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
	C 0096	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
C 0098	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0099	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0100	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0101	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0102	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0103	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0104	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0105	VCKYCZ1CB153KY	CAPACITOR 15NF 16V 10%	S	AA	AA
C 0111	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0112	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0113	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
C 0114	VCKYCY1AB475KN	CAPACITOR GRM39B 475K 10 (1608)SMD	S	AA	AA
C 0115	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0116	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0117	VCEASX0JN107MY	ELEC C 100UF 6,3V MVL6,3VC100MF60E1	S	AA	AB
C 0118	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0119	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0120	VCKYCZ1HB102KY	CAPACITOR 1NF 50V 10%	S	AA	AA
C 0121	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0124	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0125	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0126	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0127	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0128	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0131	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0133	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0134	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0136	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0139	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0140	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0142	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0144	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0145	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0146	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0147	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0149	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0150	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0151	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0154	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0155	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0156	VCKYCZ1HB102KY	CAPACITOR 1NF 50V 10%	S	AA	AA
C 0157	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0159	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0162	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0163	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0165	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0166	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0167	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0170	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0171	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0172	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0173	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0174	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0175	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0176	VCKYCZ1HB102KY	CAPACITOR 1NF 50V 10%	S	AA	AA
C 0177	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0180	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
C 0181	VCKYCZ1HB472KY	CAPACITOR 4,7NF 50V 10%	S	AA	AA
C 0182	VCKYCZ1HB472KY	CAPACITOR 4,7NF 50V 10%	S	AA	AA
C 0183	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0184	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0185	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0186	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0189	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0190	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0191	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 0192	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 0193	VCKYCZ1HB472KY	CAPACITOR 4,7NF 50V 10%	S	AA	AA
C 0194	VCKYCZ1HB472KY	CAPACITOR 4,7NF 50V 10%	S	AA	AA
C 0195	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0196	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0197	VCAAPE0JJ107MY	ELEC C 100UF 20% 6,3V 6SVP100M	S	AA	AC
C 0198	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0203	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0204	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0207	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0208	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0210	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 0211	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0217	VCKYTV1EB224KY	CERAM C 220NF 25V 10%	S	AA	AA
C 0218	VCKYTV1EB224KY	CERAM C 220NF 25V 10%	S	AA	AA
C 0220	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0221	VCKYCY1CB224KY	CAPACITOR GRM39B 224K 16 (1608)SMD	S	AA	AA
C 0223	VCKYCY1CB224KY	CAPACITOR GRM39B 224K 16 (1608)SMD	S	AA	AA
C 0224	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 0225	VCEASK1CN227MY	ELEC C 220UF 20% 16V MVY16VC220MF80	S	AA	AB
C 0248	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0253	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0261	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0262	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0263	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0265	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0312	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0313	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0319	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0320	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0323	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0324	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
C 0325	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
C 0326	RC-KZA069WJZZY	CERAM C 4,7UF 10V GRM21BB31A475KA74L	S	AA	AA
C 0327	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0330	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0331	VCCCCZ1HH101JY	S. CHIP CAP 100PF 50V 5%	S	AA	AA
C 0332	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0333	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0336	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0337	VCKYCZ1CB103KY	CAPACITOR 10NF 16V 10%	S	AA	AA
C 0338	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0339	VCAAPE1AJ127MY	ELEC C 120UF 20% 10V LOW ESR	S	AA	AC
C 0341	VRS-CZ1JF121JY	RES 0402 120 OHM 5% 1/16W SMD	S	AA	AA
C 0342	VCEASX0JN107MY	ELEC C 100UF 6,3V MVL6,3VC100MF60E1	S	AA	AB
C 0354	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 0355	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 0356	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
C 0357	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
C 0359	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0360	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0361	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
C 0362	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
C 0363	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0364	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0365	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0367	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0368	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0369	VCEASX0JN107MY	ELEC C 100UF 6,3V MVL6,3VC100MF60E1	S	AA	AB
C 0370	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0371	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0372	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0374	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
C 0375	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0376	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0377	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
C 0381	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
C 0382	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0383	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0384	VCEASX1CN476MY	ELEC C 47UF 16V MVL16VC47MF60E1	S	AA	AA
C 0387	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0389	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0390	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0391	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0392	VCKYCZ1CB223KY	CAPACITOR 22NF 16V 10%	S	AA	AA
C 0393	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0394	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0395	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0399	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 0401	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0405	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0406	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0409	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 0410	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0413	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0415	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0416	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0417	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0418	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0420	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 0422	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0424	VCCCCZ1HH271JY	C CERAM 270PF 50V 5%	S	AA	AA
C 0426	VCKYCY1CB224KY	CAPACITOR GRM39B 224K 16 (1608)SMD	S	AA	AA
C 0427	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0428	VCKYCZ1CB103KY	CAPACITOR 10NF 16V 10%	S	AA	AA
C 0429	VCKYCY1CB224KY	CAPACITOR GRM39B 224K 16 (1608)SMD	S	AA	AA
C 0430	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0431	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0432	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 0650	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
C 0651	VCKYCZ1CB473KY	CAPACITOR 47NF 16V 10%	S	AA	AA
C 0701	RC-KZA114WJZZY	CERAM C 1UF 25V GRM188B31E105AK75D	S	AA	AA
C 0702	RC-KZA114WJZZY	CERAM C 1UF 25V GRM188B31E105AK75D	S	AA	AA
C 0703	VCAAPE0JJ107MY	ELEC C 100UF 20% 6,3V 6SVP100M	S	AA	AC
C 0737	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0739	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0740	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0741	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 0761	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 0763	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 0801	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0802	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 0803	VCCCCZ1HH561JY	C CERAM 560PF 50V 5%	S	AA	AA
C 0902	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0905	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0908	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 0909	VCCCCZ1HH331JY	C CERAM 330PF 50V 5%	S	AA	AA
C 0910	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 1114	VCKYTV1EB224KY	CERAM C 220NF 25V 10%	S	AA	AA
C 1133	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 1134	VCEASK1CN227MY	ELEC C 220UF 20% 16V MVY16VC220MF80	S	AA	AB
C 1135	VCKYTV1EB224KY	CERAM C 220NF 25V 10%	S	AA	AA
C 1327	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 1328	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 1329	VCCCCZ1HH101JY	S. CHIP CAP 100PF 50V 5%	S	AA	AA
C 2301	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 2302	VCCCCZ1HH220JY	C CERAM 22PF 50V 5%	S	AA	AA
C 2303	VCKYCZ1CF104ZY	CAPACITOR 100NF 16V 20%	S	AA	AA
C 2861	VCKYCZ1HB222KY	CAPACITOR 2,2NF 50V 10%	S	AA	AA
C 3396	VCKYCZ1EF104ZY	CAPACITOR 100NF 25V 20%	S	AA	AA
C 3397	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
C 3398	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3399	VCEASK1CN227MY	ELEC C 220UF 20% 16V MVY16VC220MF80	S	AA	AB
C 3401	RC-KZA115WJZZY	CERAM C 2,2UF 10V GRM188B31A225KE33D	S	AA	AA
C 3402	VCKYCY1CB224KY	CAPACITOR GRM39B 224K 16 (1608)SMD	S	AA	AA
C 3403	VCKYCY1CB224KY	CAPACITOR GRM39B 224K 16 (1608)SMD	S	AA	AA
C 3404	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 3405	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 3406	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3407	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 3408	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 3409	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3410	VCKYCY0JB105KY	CAPACITOR GRM39B 105K 6.3 (1608)SMD	S	AA	AA
C 3411	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3412	VCKYCZ1HB222KY	CAPACITOR 2,2NF 50V 10%	S	AA	AA
C 3414	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3416	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3417	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 3418	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 3419	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 3420	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3422	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3423	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 3424	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 3425	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 3426	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3428	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3429	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 3430	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 3431	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 3432	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA
C 3434	RC-KZA237WJZZY	CERAM C EMK212BJ106KGFT 10UF 16V 10%	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
C 3435	VCCCCZ1HH470JY	C CERAM 47PF 50V 5%	S	AA	AA
C 3436	VCCCCZ1HH330JY	S. CHIP CAP 33PF 50V 5%	S	AA	AA
C 3437	VCKYCY1CB105KN	CAPACITOR 1uF 16V GRM188B31C105KA92D	S	AA	AA
C 3438	RC-KZA114WJZZY	CERAM C 1UF 25V GRM188B31E105AK75D	S	AA	AA
C 3439	RC-KZA114WJZZY	CERAM C 1UF 25V GRM188B31E105AK75D	S	AA	AA
C 3440	VCEASK1CN227MY	ELEC C 220UF 20% 16V MVY16VC220MF80	S	AA	AB
		RESISTORS			
R 0004	VRS-CY1JF104JY	RES 0603 100KOHM 5% 1/10W SMD	S	AA	AA
R 0007	VRS-CY1JF122FY	RES 0603 1,2KOHM 1% 1/10W SMD	S	AA	AA
R 0008	VRS-CY1JF202FY	RES 0603 2KOHM 1% 1/10W SMD	S	AA	AA
R 0009	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0010	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0011	VRS-CY1JF121JY	SURFACE MOUNT CHIP RESISTOR 120 OHM	S	AA	AA
R 0012	VRS-CY1JF222JY	RES 0603 2,2KOHM 5% 1/10W SMD	S	AA	AA
R 0013	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0014	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 0015	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0016	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0021	VRS-CY1JF105JY	RES 0603 1MOHM 5% 1/10W SMD	S	AA	AA
R 0022	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
R 0023	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
R 0024	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0025	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD	S	AA	AA
R 0026	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0027	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD	S	AA	AA
R 0028	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0029	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD	S	AA	AA
R 0030	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0031	VRS-CY1JF391FY	RES 0603 390 OHM 1% 1/10W SMD	S	AA	AA
R 0032	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD	S	AA	AA
R 0033	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0034	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0035	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0036	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0037	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0038	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0039	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0044	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0045	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0046	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0047	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD	S	AA	AA
R 0049	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0050	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0053	VRS-CY1JF330JY	RES 0603 33 OHM 5% 1/10W SMD	S	AA	AA
R 0054	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 0055	VRS-CY1JF102FY	CHIP RESISTOR 1% 1K	S	AA	AA
R 0056	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0057	VRS-CY1JF102FY	CHIP RESISTOR 1% 1K	S	AA	AA
R 0058	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD	S	AA	AA
R 0060	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0061	VRS-CZ1JF223JY	RES 0402 22KOHM 5% 1/16W SMD	S	AA	AA
R 0063	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 0065	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 0068	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0073	VRS-CY1JF102JY	RES 0603 1KOHM 5% 1/10W SMD	S	AA	AA
R 0076	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 0079	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0080	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0082	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0084	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0092	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0101	VRS-CY1JF333JY	RES 0603 33KOHM 5% 1/10W SMD	S	AA	AA
R 0102	VRS-CY1JF333JY	RES 0603 33KOHM 5% 1/10W SMD	S	AA	AA
R 0103	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0104	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0105	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0107	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0109	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD	S	AA	AA
R 0110	VRS-CY1JF333JY	RES 0603 33KOHM 5% 1/10W SMD	S	AA	AA
R 0111	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD	S	AA	AA
R 0112	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0113	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0114	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0115	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0120	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0121	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD	S	AA	AA
R 0122	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 0133	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0134	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0135	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0136	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0137	VRS-CY1JF102FY	CHIP RESISTOR 1% 1K	S	AA	AA
R 0138	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0139	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0140	VRS-CY1JF102FY	CHIP RESISTOR 1% 1K	S	AA	AA
R 0141	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0142	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0143	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0144	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0145	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0146	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0147	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0148	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0149	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0150	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0151	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0152	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0153	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0154	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0155	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0156	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0157	VRS-CY1JF102FY	CHIP RESISTOR 1% 1K	S	AA	AA
R 0158	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0159	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0160	VRS-CY1JF102FY	CHIP RESISTOR 1% 1K	S	AA	AA
R 0161	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0162	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0163	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0164	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0165	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0166	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0167	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0168	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 0169	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0170	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0171	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0172	VRS-CZ1JF560JY	RES 0402 56 OHM 5% 1/16W SMD	S	AA	AA
R 0173	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0174	VRS-CY1JF623JY	RES 0603 62KOHM 5% 1/10W SMD	S	AA	AA
R 0175	VRS-CY1JF113FY	RES 0603 11KOHM 1% 1/10W SMD	S	AA	AA
R 0176	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0178	VRS-CY1JF750JY	S CHIP RESISTOR 75 OHM	S	AA	AA
R 0179	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0180	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0184	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0185	VRS-CY1JF471JY	RES 0603 470 OHM 5% 1/10W SMD	S	AA	AA
R 0186	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0187	VRS-CY1JF683JY	RES 0603 68KOHM 5% 1/10W SMD	S	AA	AA
R 0188	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0189	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0191	VRS-CY1JF273JY	S. CHIP RES. 27-OHM TAPED	S	AA	AA
R 0192	VRS-CY1JF221JY	RES 0603 220 OHM 5% 1/10W SMD	S	AA	AA
R 0193	VRS-CY1JF750JY	S CHIP RESISTOR 75 OHM	S	AA	AA
R 0194	VRS-CY1JF680JY	RES 0603 68 OHM 5% 1/10W SMD	S	AA	AA
R 0195	VRS-CY1JF113FY	RES 0603 11KOHM 1% 1/10W SMD	S	AA	AA
R 0196	VRS-CY1JF623JY	RES 0603 62KOHM 5% 1/10W SMD	S	AA	AA
R 0197	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0198	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0203	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0204	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0222	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0223	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0224	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0225	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0226	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0227	VRS-CY1JF473JY	RES 0603 47KOHM 5% 1/10W SMD	S	AA	AA
R 0228	VRS-CY1JF473JY	RES 0603 47KOHM 5% 1/10W SMD	S	AA	AA
R 0229	VRS-CY1JF102JY	RES 0603 1KOHM 5% 1/10W SMD	S	AA	AA
R 0230	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0231	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0233	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0244	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0245	VRS-CY1JF473JY	RES 0603 47KOHM 5% 1/10W SMD	S	AA	AA
R 0246	VRS-CY1JF473JY	RES 0603 47KOHM 5% 1/10W SMD	S	AA	AA
R 0247	VRS-CY1JF102JY	RES 0603 1KOHM 5% 1/10W SMD	S	AA	AA
R 0248	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0249	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0250	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0266	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0284	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0292	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD	S	AA	AA
R 0293	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0295	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0296	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0298	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0299	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD	S	AA	AA
R 0300	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0302	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0304	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD	S	AA	AA
R 0305	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 0320	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0321	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0323	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0324	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0325	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0327	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0328	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0329	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0330	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0332	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0333	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0345	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0347	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0348	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0349	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0350	VRS-CY1JF102JY	RES 0603 1KOHM 5% 1/10W SMD	S	AA	AA
R 0351	VRS-CY1JF102JY	RES 0603 1KOHM 5% 1/10W SMD	S	AA	AA
R 0352	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0354	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
R 0357	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0358	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0359	VRS-TW2HPR56JY	RES LCR1/4R15J 0,56 OHM 5% 1/2W SMD	S	AA	AA
R 0360	VRS-TW2HPR56JY	RES LCR1/4R15J 0,56 OHM 5% 1/2W SMD	S	AA	AA
R 0361	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0362	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 0363	VRK-SB1FF220JY	RES 22 OHM 5% 1/32W SMD	S	AA	AA
R 0364	VRK-SB1FF220JY	RES 22 OHM 5% 1/32W SMD	S	AA	AA
R 0391	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0394	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0395	VRS-CZ1JF223FY	RES 0402 22KOHM 1% 1/16W SMD	S	AA	AA
R 0397	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0407	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD	S	AA	AA
R 0414	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0415	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0417	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0418	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0419	VRS-CY1JF100JY	RES 0603 10 OHM 5% 1/10W SMD	S	AA	AA
R 0420	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0421	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0422	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0423	VRS-CY1JF220JY	RES 0603 22 OHM 5% 1/10W SMD	S	AA	AA
R 0424	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0425	VRS-CZ1JF220JY	RES 0402 22 OHM 5% 1/16W SMD	S	AA	AA
R 0426	VRS-CY1JF473JY	RES 0603 47KOHM 5% 1/10W SMD	S	AA	AA
R 0427	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0447	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 0448	VRS-CZ1JF152JY	RES 0402 1,5KOHM 5% 1/16W SMD	S	AA	AA
R 0450	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0452	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0453	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0455	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0482	VRS-CZ1JF221JY	RES 0402 220 OHM 5% 1/16W SMD	S	AA	AA
R 0484	VRS-CZ1JF221JY	RES 0402 220 OHM 5% 1/16W SMD	S	AA	AA
R 0485	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD	S	AA	AA
R 0486	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD	S	AA	AA
R 0487	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0498	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA

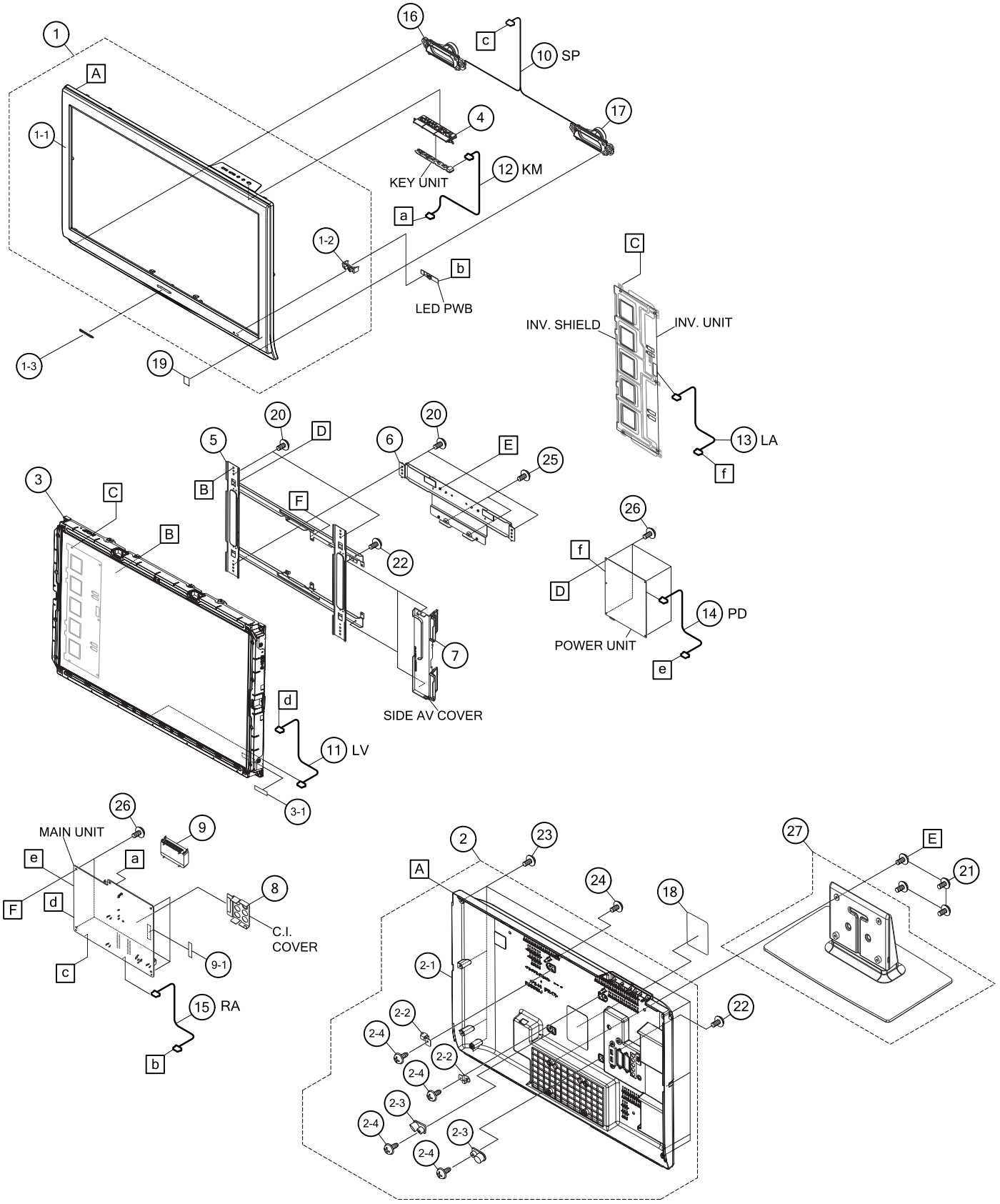
REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 0500	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 0501	VRS-CY1JF102JY	RES 0603 1KOHM 5% 1/10W SMD	S	AA	AA
R 0502	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0503	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0504	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0505	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
R 0509	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0522	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD	S	AA	AA
R 0530	VRS-CZ1JF620JY	RES 0402 62 OHM 5% 1/16W SMD	S	AA	AA
R 0534	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0535	VRS-CY1JF220JY	RES 0603 22 OHM 5% 1/10W SMD	S	AA	AA
R 0536	VRS-CY1JF220JY	RES 0603 22 OHM 5% 1/10W SMD	S	AA	AA
R 0537	VRS-CY1JF202JY	RES 0603 2KOHM 5% 1/10W SMD	S	AA	AA
R 0538	VRS-CY1JF202JY	RES 0603 2KOHM 5% 1/10W SMD	S	AA	AA
R 0540	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0542	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0543	VRS-CZ1JF331JY	RES 0402 330 OHM 5% 1/16W SMD	S	AA	AA
R 0544	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0545	VRS-CZ1JF331JY	RES 0402 330 OHM 5% 1/16W SMD	S	AA	AA
R 0546	VRS-CZ1JF392JY	RES 0402 3,9KOHM 5% 1/16W SMD	S	AA	AA
R 0547	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD	S	AA	AA
R 0549	VRS-CY1JF100JY	RES 0603 10 OHM 5% 1/10W SMD	S	AA	AA
R 0550	VRS-CZ1JF472JY	RES 0402 4,7KOHM 5% 1/16W SMD	S	AA	AA
R 0551	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0554	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 0555	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 0556	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 0620	VRS-CZ1JF750JY	RES 0402 75 OHM 5% 1/16W SMD	S	AA	AA
R 0658	VRS-CZ1JF822JY	RES 0402 8,2KOHM 5% 1/16W SMD	S	AA	AA
R 0700	VRS-CY1JF750JY	S CHIP RESISTOR 75 OHM	S	AA	AA
R 0701	VRS-CZ1JF470JY	RES 0402 47 OHM 5% 1/16W SMD	S	AA	AA
R 0702	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0703	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 0814	VRS-CY1JF680JY	RES 0603 68 OHM 5% 1/10W SMD	S	AA	AA
R 0815	VRS-CY1JF221JY	RES 0603 220 OHM 5% 1/10W SMD	S	AA	AA
R 0816	VRS-CY1JF750JY	S CHIP RESISTOR 75 OHM	S	AA	AA
R 0817	VRS-CY1JF683JY	RES 0603 68KOHM 5% 1/10W SMD	S	AA	AA
R 0818	VRS-CY1JF273JY	S. CHIP RES. 27-OHM TAPED	S	AA	AA
R 0819	VRS-CY1JF471JY	RES 0603 470 OHM 5% 1/10W SMD	S	AA	AA
R 0905	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0910	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 0911	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 0912	VRS-CY1JF123JY	RES 0603 12KOHM 5% 1/10W SMD	S	AA	AA
R 1001	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1002	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1003	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1004	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1005	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1006	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1007	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1008	VRK-SB1FF330JY	RES 33 OHM 5% 1/32W SMD	S	AA	AA
R 1009	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1010	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1011	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1012	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1013	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1014	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 1015	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1016	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1017	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1018	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1019	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1020	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1021	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1022	VRK-SB1FF560JY	RES 56 OHM 5% 1/32W SMD	S	AA	AA
R 1109	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 1123	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 1127	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 1174	VRS-CZ1JF102JY	RES 0402 1KOHM 5% 1/16W SMD	S	AA	AA
R 1228	VRS-CY1JF103JY	RES 0603 10KOHM 5% 1/10W SMD	S	AA	AA
R 1318	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 1514	VRS-CY1JF220JY	RES 0603 22 OHM 5% 1/10W SMD	S	AA	AA
R 1517	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
R 1525	VRS-CY1JF220JY	RES 0603 22 OHM 5% 1/10W SMD	S	AA	AA
R 1526	VRK-SB1FF220JY	RES 22 OHM 5% 1/32W SMD	S	AA	AA
R 1527	VRK-SB1FF220JY	RES 22 OHM 5% 1/32W SMD	S	AA	AA
R 1547	VRS-CZ1JF000JY	RES 0402 0 OHM 5% 1/16W SMD	S	AA	AA
R 2081	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD	S	AA	AA
R 2082	VRS-CZ1JF151JY	RES 0402 150 OHM 5% 1/16W SMD	S	AA	AA
R 2314	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 2315	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8133	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 8134	VRS-CY1JF472JY	RES 0603 4,7KOHM 5% 1/10W SMD	S	AA	AA
R 8136	VRS-CZ1JF221JY	RES 0402 220 OHM 5% 1/16W SMD	S	AA	AA
R 8137	VRS-CZ1JF822JY	RES 0402 8,2KOHM 5% 1/16W SMD	S	AA	AA
R 8138	VRS-CY1JF100JY	RES 0603 10 OHM 5% 1/10W SMD	S	AA	AA
R 8139	VRS-CY1JF100JY	RES 0603 10 OHM 5% 1/10W SMD	S	AA	AA
R 8140	VRS-CY1JF100JY	RES 0603 10 OHM 5% 1/10W SMD	S	AA	AA
R 8141	VRS-CY1JF273JY	S. CHIP RES. 27-OHM TAPED	S	AA	AA
R 8142	VRS-CZ1JF221JY	RES 0402 220 OHM 5% 1/16W SMD	S	AA	AA
R 8143	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 8144	VRS-CZ1JF101JY	RES 0402 100 OHM 5% 1/16W SMD	S	AA	AA
R 8145	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD	S	AA	AA
R 8146	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8147	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD	S	AA	AA
R 8148	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8149	VRS-CZ1JF473JY	RES 0402 47KOHM 5% 1/16W SMD	S	AA	AA
R 8150	VRS-CY1JF104JY	RES 0603 100KOHM 5% 1/10W SMD	S	AA	AA
R 8151	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
R 8152	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
R 8153	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
R 8154	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD	S	AA	AA
R 8155	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD	S	AA	AA
R 8156	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8157	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8158	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8159	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8160	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
R 8161	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD	S	AA	AA
R 8162	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD	S	AA	AA
R 8163	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
R 8164	VRS-CY1JF104JY	RES 0603 100KOHM 5% 1/10W SMD	S	AA	AA
R 8166	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
R 8167	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD	S	AA	AA

	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
	R 8168	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD	S	AA	AA
	R 8169	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
	R 8170	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
	R 8171	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
	R 8173	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
	R 8174	VRS-CZ1JF471JY	RES 0402 470 OHM 5% 1/16W SMD	S	AA	AA
	R 8175	VRS-CZ1JF333JY	RES 0402 33KOHM 5% 1/16W SMD	S	AA	AA
	R 8176	VRS-CZ1JF103JY	RES 0402 10KOHM 5% 1/16W SMD	S	AA	AA
	R 8178	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
	R 8179	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
	R 8180	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
	R 8181	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
	R 8182	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
	R 8183	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
	R 8184	VRS-CZ1JF104JY	RES 0402 100KOHM 5% 1/16W SMD	S	AA	AA
			MISCELLANEOUS PARTS			
	FB 0010	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
	FB 0011	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
	FB 0012	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
	FB 0013	VRS-CY1JF000JY	RES 0603 0 OHM 5% 1/10W SMD	S	AA	AA
	FB 0301	RBLN-0210TAZZY	BALUNE BLM21PG221SN1D	S	AA	AA
	FB 1501	RBLN-A022WJZZY	BALUNE BLM18BB121SN1D	S	AA	AA
	FB 1502	RBLN-A022WJZZY	BALUNE BLM18BB121SN1D	S	AA	AA
	FB 1503	RBLN-A022WJZZY	BALUNE BLM18BB121SN1D	S	AA	AA
	J 1003	QJAKJ0008GEZZ	HEADPHONE JACK YKB21-5157V	S	AA	AB
	J 1301	QJAKJA014WJZZ	JACK HEADPHONE PJ-364H	S	AA	AC
	J 1305	QJAKEA086WJ00	JACK RCA-101H(BK)	S	AA	AB
	J 1401	QJAKKA007WJZZ	JACK RCA--512HAT-00A-03	S	AB	AE
	J 4001	QJAKJ0008GEZZ	HEADPHONE JACK YKB21-5157V	S	AA	AB
	J 8101	QSOCZA153WJQZ	CONNECTOR USB CSS5004-1F01F	S	AB	AE
	LUG170	QLUGHA006WJZZY	METALLIC LUG SD01138-21	S	AA	AA
	LUG170	QLUGHA006WJZZY	METALLIC LUG SD01138-21	S	AA	AA
	LUG170	QLUGHA006WJZZY	METALLIC LUG SD01138-21	S	AA	AA
	LUG170	QLUGHA006WJZZY	METALLIC LUG SD01138-21	S	AA	AA
	P 1701	QPLGN0185FJZZY	CONNECTOR S13B-PH-SM4-TB	S	AA	AC
	P 2301	QPLGN0563TAZZY	CONNECTOR 53261-0590	S	AA	AB
	P 2701	QPLGNA160WJZZY	CONNECTOR SM04B-PASS-TBT(LF)	S	AA	AB
	P 3071	QPLGNA324WJZZY	CONNECTOR SM04B-GHS-(FL)(SN)	S	AA	AB
	SC 1101	QSOCZA161WJZZ	SCART RGB-11H	S	AA	AD
	SC 1102	QSOCZA161WJZZ	SCART RGB-11H	S	AA	AD
	SC 1901	QSOCZA175WJZZY	CONECTOR HDMI A111924-A-15-R	S	AB	AD
	SC 1902	QSOCZA175WJZZY	CONECTOR HDMI A111924-A-15-R	S	AB	AD
	SC 4401	QCNCMA332WJSA	C.I.CARD SLOT	S	AD	AK
	SC 8201	QPLGNA493WJZZY	CONNECTOR FI-X30SSL-HF-2500	S	AC	AF
			DUNTKF262FM05			
			LED Unit			
			DIODES			
	D 5103	RH-PX0421CEZZY	LED DIODO CL-165HR/YG-D-A1 CITIZEN	S	AA	AB
			CAPACITORS			
	C 5102	VCKYTV1CF225ZY	CERAM C 2,2UF 16V 2125SMD	S	AA	AA
			RESISTORS			
	R 5101	VRS-CY1JF101JY	RES 0603 100 OHM 5% 1/10W SMD	S	AA	AA
	R 5108	VRS-CY1JF151JY	RES 0603 150 OHM 5% 1/10W SMD	S	AA	AA
	R 5109	VRS-CY1JF681JY	RES 0603 680 OHM 5% 1/10W SMD	S	AA	AA
			MISCELLANEOUS PARTS			
	P 5101	QPLGN0563TAZZY	CONNECTOR 53261-0590	S	AA	AB

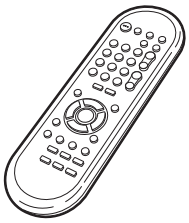
	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
	RMC510	RRMCUA053WJZZ	R/C RECEIVER UNIT	S	AA	AD
	SLD510	PSLDPA076WJFW	SHIELD CASE	S	AA	AA
			DUNTKE266FM19			
			KEY Unit			
			RESISTORS			
	R 0151	VRD-RA2BE822JY	RES 8,2KOHM 5% 1/8W	S	AA	AA
	R 0152	VRD-RA2BE123JY	RES 12K OHM 5% 1/8W	S	AA	AA
	R 0153	VRD-RA2BE822JY	RES 8,2KOHM 5% 1/8W	S	AA	AA
	R 0154	VRD-RA2BE123JY	RES 12K OHM 5% 1/8W	S	AA	AA
			MISCELLANEOUS PARTS			
	P 0151	QPLGNA059WJZZ	CONNECTOR S05B-PASK-2	S	AA	AA
	S 0151	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
	S 0152	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
	S 0153	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
	S 0154	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
	S 0155	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
	S 0156	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
	S 0157	QSW-K0003AJZZ+	SWITCH EVQ-11A-05R_A MATSUSHITA	S	AA	AA
			RDENCA366WJQZ			
			POWER Unit			
⚠		RDENCA366WJQZ	POWER SUPPLY	S	AV	BG

CABINET AND MECHANICAL PARTS

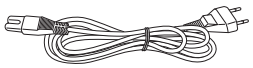


Supplied accessories

Remote control unit (×1)



AC cord (×1)



Product shape varies in some countries.

- "AA" size zinc-carbon battery (×2)
- Operation manual

CABINET AND MECHANICAL PARTS LISTING

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
1	CCABAC354WJ01	KS-CAB-A LC32	S	AR	BC
1-1	GCABAC354WJ1A	Cabinet	S	--	--
1-2	HDECQB287WJ1A	Cover Led	S	--	--
1-3	HBDGBA070WJSA	SHARP Badge	S	AB	AE
2	CCABBB561WJ01	KS-CAB-B LC32	S	AS	BC
2-1	GCABBB561WJ1A	Rear Cabinet	S	--	--
2-2	LANGKB882WJFW	Angle	S	AA	AB
2-3	LHLDZA929WJZZ	Holder	S	AA	AD
2-4	XEBS730P08000	Screw	S	AA	AA
3	R1LK315T3LA57Y	Panel 32" WXGA SMPL LK315T3LA57	S	CC	CW
3-1	TLABN0134BMZZ	Panel label	S	AA	AA
4	JBTN-A718WJ1A	Control Button 0158007180	S	AB	AE
5	CANGKC812WJ01	KS-Angle	S	AH	AU
6	CANGKC315WJ01	KS-Stand Angle	S	AF	AQ
7	GCOVAD649WJ1A	TERMINAL COVER	S	AC	AH
8	GCOVAD468WJSA	CI COVER	S	AA	AD
9	RTUDAA019WJQZ	Tuner.	S	AP	BA
9-1	TLABN0134BMZZ	Chasis label	S	AA	AA
10	QCNW-K098WJQZ	Twisted Wire (SP)	S	AB	AF
11	QCNW-K156WJPZ	Coaxial wire (LV) (Control-Main)	S	AH	AU
12	QCNW-G660WJQZ	Twisted Wire (KM) ACNWC5799-01A	S	AA	AD
13	QCNW-J655WJZZ	Wire (LA) (Inver-Power).	S	AC	AG
14	QCNW-K097WJZZ	Wire (PD) (Power-Main)	S	AB	AF
15	QCNW-K109WJQZ	Led unit wire (RA).	S	AA	AD
16	RSP-ZA321WJZZ	SPEAKER 8 OHM 10W 305-S12008B1100 (L)	S	AF	AQ
17	RSP-ZA322WJZZ	SPEAKER 8 OHM 10W 305-S02008B1000 (R)	S	AF	AQ
18	TLABNC117WJZZ	Model Label.	S	AA	AA
19	TLABZC354WJZZ	ECO Label on A_Cab	S	AA	AB
20	XBBS740P06000	Screw, x4 (Fix Bracket set and Stand Bracket set).	S	AA	AA
21	XBBS740P30000	Screw, x4 (Fix Stand LCD).	S	AA	AA
22	XEBS730P08000	Screw, x3 (Fix terminals area and AV cover).	S	AA	AA
23	XEBS740P16000	Screw, x8 (Fix A_Cab).	S	AA	AA
24	XEBS930P14000	Screw, x1 (Fix A_Cab upper central area).	S	AA	AA
25	XEBS930P14J00	Screw, x2 (Fix lower stand bracket).	S	AA	AA
26	XHPS730P06WS0	Screw, x8 (Fix PWB's).	S	AA	AA
27	CDAI-A666WJ01	Stand Ass'y LC- 32DH510E.	S	AM	AX

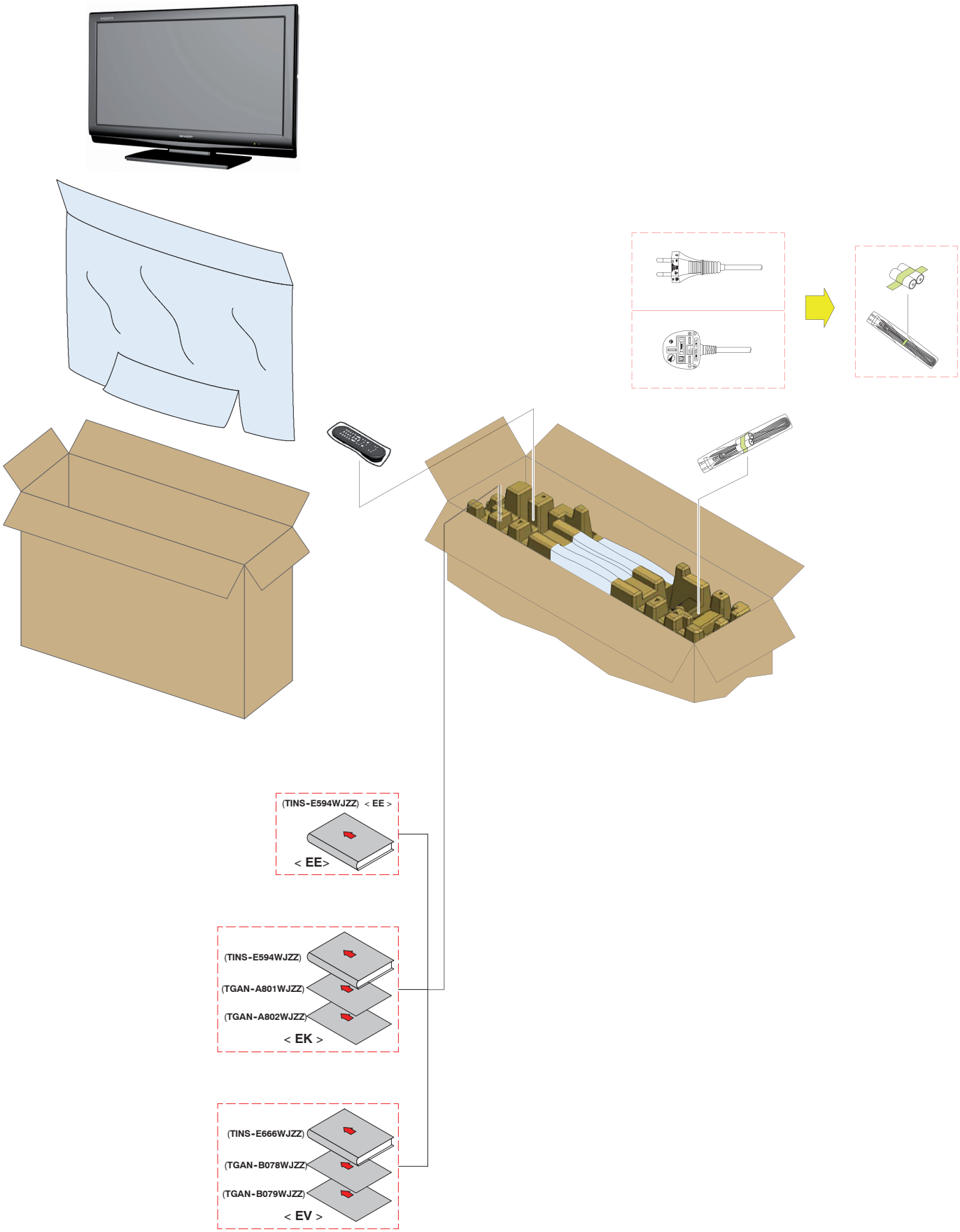
ACCESSORIES PARTS LISTING

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
⚠	QACCKA047WJPZ	AC-Cord (except U.K. and Eire)	S	AC	AH
⚠	QACCBA054WJPZ	AC-Cord (for U.K. and Eire)	S	AB	AM
	TINS-E594WJZZ	Owners Manual (for Europe except East Europe)	S	AD	AL
	TINS-E666WJZZ	Owners Manual (for East Europe)	S	AE	AP
	TGAN-B078WJZZ	Warranty card (for East Europe)	S	AA	AC
	TGAN-B079WJZZ	Warranty card (for East Europe)	S	AA	AC
	TGAN-A801WJZZ	Warranty card (for U.K. and Eire)	S	AA	AC
	TGAN-A802WJZZ	Warranty card AQUOS CA (for U.K. and Eire)	S	AA	AC
	UBATUA023WJZZ	Battery R6UWC/2SKD x2	S	AA	AC
	RRMCGA608WJSA	R/C YKF204-004	S	AE	AN

PACKING PARTS LISTING

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
	SPAKCF603WJZZ	Packing Case	S	AF	AR
	SPAKPB499WJZZ	HOSO-PP	S	AD	AM
	SPAKXC946WJZZ	Pack-AD (Paper Pulp).	S	AE	AP

PACKING OF THE SET



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SHARP CORPORATION
AV System Group

SHARP ELECTRONICA ESPAÑA S.A.
Service Manual Group
Engineering Dept.
C/ Sena, 2-10
08174 Sant Cugat del Vallès
Barcelona
Spain